



CABI Science Report

2023

Issued June 2024

www.cabi.org

KNOWLEDGE FOR LIFE



The copyright holder of this work is CABI International (trading as CABI). It is made available under a Creative Commons Attribution-Non-commercial Licence (CC BY-NC). For further details please refer to <http://creativecommons.org/licenses/>.

CABI as an international intergovernmental not-for-profit organization, gratefully acknowledges the generous support received from our many donors, sponsors and partners. In particular we thank our Member Countries for their vital financial and strategic contributions.

CABI (2024) CABI Science Report 2023. CABI, Wallingford, UK, 60 pp.

Cover photo: Undergraduate and postgraduate interns learning *Aspergillus* isolation and aflatoxin basic testing ©CABI
Inside front cover photo: © CABI (Sarah Hilliar)

Page 7 photo: © CABI (René Eschen)

Page 15 photo: © CABI (Stefan Toepfer)

Page 43 photo: © CABI (Philip Weyl)

Page 57 photo: © Mark Henley / Panos Pictures for CABI

Contents

1. Implementing the CABI Science Strategy	2
Maintain CABI's annual publication record	2
CABI's research published open access.....	3
Support for the preparation of research papers	3
CABI Scientific Publication Recognition scheme 2023.....	3
Carol Ellison Science Award	4
CABI Scientific Outputs.....	5
Effective scientific reporting mechanisms.....	5
Public relations support for CABI's scientific papers published in 2023.....	5
Research students (MSc, PhD, etc.) and interns (summer students)	5
Strategically important scientific review/synthesis papers published	6
Contributions of CABI staff to publications in which authors are not listed	7
The BIOCAT database	7
2. Scientific outputs	8
2.1. Honours, honorary roles	8
2.2. Support to international scientific meetings	11
2.3. Journal contributions.....	12
2.4. Publications	16
2.4.1. Books, proceedings and manuals (8).....	16
2.4.2. Peer-reviewed papers (132).....	16
2.4.3. Book chapters and proceedings papers (8)	27
2.4.4. Case studies, study briefs, working papers and publications that were not peer-reviewed (21)....	28
2.4.5. Completed theses (9).....	29
2.4.6. Published datasets (2).....	30
2.4.7. 2022 publications not previously listed (1).....	30
2.5. Scientific project reports (65)	30
2.6. Oral presentations at scientific meetings (105)	34
2.7. Poster presentations at scientific meetings (34)	40
3. Other outputs	44
3.1. Support for introduction of classical biological control agents	44
3.2. Extension material.....	45
3.3. Distribution maps of plant pests/diseases.....	45
3.4. CABI Bioscience identification service and Genetic Resources Collection.....	45
4. CABI staff, students and associates	46
4.1. Scientific staff.....	46
4.2. CABI staff working towards a research degree.....	52
4.3. Research students	52
4.4. Certificates and Diploma of Advanced Studies in Integrated Crop Management.....	54
4.5. CABI Associates.....	54
4.6. Visiting scientists	55
4.7. Technical support	55
4.8. Temporary research students/interns	56

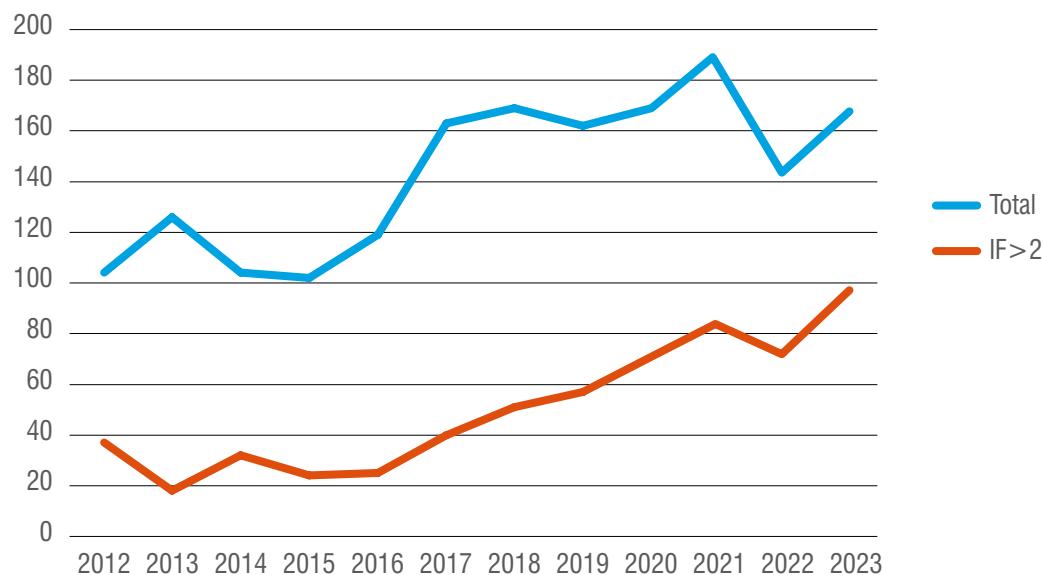
1. Implementing the CABI Science Strategy

In this section we present highlights from a number of areas anticipated in the [CABI Science Strategy](#), 2022–2025, part of it supported by the CABI Development Fund (CDF).

Maintain CABI's annual publication record

It is one of CABI's corporate key performance indicators to produce at least 100 scientific publications each year, of which at least 30 are in journals with an impact factor greater than 2.00 that year. The table below summarizes the listings that are shown later in this report (Section 2), while the graph shows the trend over the last 12 years; it can be seen that we significantly exceeded both targets in 2023.

Scientific publications in 2023	Open access	Not open access	Total
Total number of publications	130	39	169
Number of peer-reviewed publications	118	34	152
Number of peer-reviewed journal publications	109	23	132
Number of publications in journals with a 2022 impact factor >2	79	19	98
Papers with a socio-economic focus	27	1	28
Publications with a development focus	30	4	34
Not peer-reviewed	12	5	17
Books, proceedings and manuals	7	1	8
Book chapters and proceedings papers	3	5	8



Total annual number of publications by CABI staff since 2012, and the number appearing in journals with an impact factor greater than 2.00 (IF>2)

Since 2018, a second CABI corporate key performance indicator has been that at least 15 of our published papers should have a socio-economic focus which should gradually increase to at least 25 publications in 2024 and 2025. In 2023, 28 publications were considered to meet and exceed this criterion. Another key milestone since 2022 requires that the top 50 CABI scientists have an average h-index of more than 15. This criterion was met with an average h-index of 21.1 (Google Scholar accessed on 22 May 2023).

CABI's research published open access

In a further CABI corporate key performance indicator, CABI aimed to publish its research open access, specifically all of CABI's core research published in peer-reviewed journals with a CABI staff member lead or corresponding author should be open access. In 2023, 48 out of 49 such papers (98%) were published open access (Section 2.4.2), compared to 43 of 44 such papers (97.7%) in 2022. The costs were met from projects (when appropriate), CDF and CABI centre budgets.

Support for the preparation of research papers

CABI has used CDF funding to support staff time for the publication of selected papers, particularly those arising from completed projects, where resources are not otherwise available. The following papers published in 2023 received support in this way.

EPPO (2023) PM 6/5 (1) Host specificity testing of non-indigenous (classical) biological control agents used against invasive alien plants. *EPPO Bulletin* 53, 480–490. <https://doi.org/10.1111/epp.12954>

Kadzamira, M.A.T.J., Ogunmodede, A., Duah, S., Romney, D., Clottey, V.A. and Williams, F. (2023) African agri-entrepreneurship in the face of the COVID-19 pandemic. *CABI Agriculture and Bioscience* 4, 16, 9 pp. <https://doi.org/10.1186/s43170-023-00157-3>

Mugambi, I., Danielsen, S., Kansiime, M., Makale, F., Chacha, D., Rware, H. and Chege, F. (2023) Are integrated crop-livestock clinics an option for Kenyan smallholder farmers to address One Health issues? *CABI Study Brief 44: Learning*, 11 pp. <https://dx.doi.org/10.1079/CABICOMM-62-8171>

Tambo, J.A., Mugambi, I., Onyango, D.O., Uzayisenga, B. and Romney, D. (2023) Using mass media campaigns to change pesticide use behaviour among smallholder farmers in East Africa. *Journal of Rural Studies* 99, 79–91. <https://doi.org/10.1016/j.jrurstud.2023.03.001>

CABI Scientific Publication Recognition scheme 2023

A Scientific Publication Recognition scheme for CABI's scientists was designed, resourced from the CDF, and implemented since 2017. In 2022, several awards were modified or introduced to align more closely with DORA (The Declaration on Research Assessment) and comments of the 2020–21 external science review. Six awards to recognize achievements in 2022 were made of £2000, each to be spent as the awardee decided in support of CABI's scientific strategy.



Marc Kenis

Award 1: The CABI staff member with the largest number of authored/co-authored papers in journals with IF>2 in 2022. Marc Kenis – for ten authored/co-authored papers.



**Melanie
Bateman**

Award 2: The CABI staff member (first and/or corresponding author) of the publication from the last five years (published since 1 January 2018) with the most citations (2018 to end 2022 on Google Scholar). Melanie Bateman – for the following paper: Bateman, M.L., Day, R.K., Luke, B., Edgington, S., Kuhlmann, U. and Cock, M.J.W. (2018) Assessment of potential biopesticide options for managing fall armyworm (*Spodoptera frugiperda*) in Africa. *Journal of Applied Entomology* 142(9), 805–819. <https://doi.org/10.1111/jen.12565> (116 citations, Google Scholar accessed 2–3 June 2023).



**Monica
Kansiime**

Award 3: The CABI staff member (first and/or corresponding author) with the largest number of socio-economic papers in journals with IF>2 in 2022. Monica Kansiime – for one paper lead author in a journal with IF>2, one paper lead author in a journal with IF>1, two papers co-author in a journal with IF>2.



Léna Durocher-Granger

Award 4: The CABI staff early career scientist (no PhD or PhD held less than three years on 1 January 2023) who has published a paper as first author since 1 January 2021 with the most citations in the last two years (2021 to end 2022 on Google Scholar). Léna Durocher-Granger – for the following paper: Durocher-Granger, L., Mfune, T., Musesha, M., Lowry, A., Reynolds, K., Buddie, A., Cafà, G., Offord, L., Chipabika, G., Dicke, M. and Kenis, M. (2021) Factors influencing the occurrence of fall armyworm parasitoids in Zambia. *Journal of Pest Science* 94, 1133–1146. <https://doi.org/10.1007/s10340-020-01320-9> [Correction: <https://doi.org/10.1007/s10340-021-01435-7>] (19 citations, Google Scholar accessed 2–3 June 2023).



René Eschen

Award 5: The CABI staff member (first and/or corresponding author) who has published the paper in *CABI Agriculture and Bioscience* or *CABI One Health* with the most citations in the last two years (2021 to end 2022 on Google Scholar). René Eschen – for the following paper:

Eschen, R., Beale, T., Bonnin, M., Constantine, K.L., Duah, S., Finch, E.A., Makale, F., Nunda, W., Ogunmodede, A., Pratt, C.F., Thompson, E., Williams, F., Witt, A. and Taylor, B. (2021) Towards estimating the economic cost of invasive alien species to African crop and livestock production. *CABI Agriculture and Bioscience* 2, 18, 18 pp. <https://doi.org/10.1186/s43170-021-00038-7> [Correction: <https://doi.org/10.1186/s43170-021-00052-9>] (33 citations, Google Scholar accessed 2–3 June 2023).



Joseph Mulema

Award 6: The CABI staff member (first and/or corresponding author) based in Africa, the Americas or Asia of the publication since 1 January 2021 with the most citations in the last two years (2021 to end 2022 on Google Scholar). Joseph Mulema – for the following paper:

Mulema, J., Mugambi, I., Kansiime, M., Chan, H.T., Chimalizeni, M., Pham, T.X. and Oduor, G. (2021) Barriers and opportunities for the youth engagement in agribusiness: empirical evidence from Zambia and Vietnam. *Development in Practice* 31(5), 690–706. <https://doi.org/10.1080/09614524.2021.1911949> (17 citations, Google Scholar accessed 2–3 June 2023).

Carol Ellison Science Award



This annual award was introduced in 2021, following a similar format to the Scientific Publication Recognition awards. Named after our late colleague, the Carol Ellison Science Award is given to a student doing her/his research with CABI, or an early career CABI researcher, with the objective of enriching their research experience with CABI.

The 2023 Carol Ellison Science Award was awarded to **Muhammad Yasir Ali**, PhD student at CABI and MARA–CABI Joint Laboratory for Bio-safety in Beijing, China. Under the supervision of Feng Zhang and Jinping Zhang (CABI), Yasir's study focused on the efficacy of field releases of the egg parasitoid,

Anastatus japonicus, against the brown marmorated stink bug (BMSB), *Halyomorpha halys*. This highly polyphagous pest is native to East Asia (China, Japan and Korea) and invasive in North and South America and Europe, where it causes damage to many economically important crops. Chemical control is the most used control method against BMSB, but due to negative impacts on the environment and human health, more effective and environmentally friendly methods such as biological control are urgently needed. The egg parasitoid, *Anastatus japonicus*, is one of the most abundant egg parasitoids of BMSB in China and has therefore been considered for inundative biological control.

Yasir's study was designed to assess the control effect of mass releases of *A. japonicus* against BMSB in Chinese kiwifruit orchards. In field releases, Yasir demonstrated that *A. japonicus* can cause egg parasitism of up to 93%. However, parasitism decreased when BMSB egg masses were more than 8 metres away from the release points. This study provides baseline data for future investigations on the ability of parasitoid dispersal and host location at long and short distances. The results of the study will be presented at the 3rd International Congress of Biological Control in June 2024, and one peer-reviewed article is currently under preparation.

CABI Scientific Outputs

Scientific papers and other publications by CABI scientists from the early 20th century to the present day can be found through our open access website [CABI Scientific Outputs](#), which is updated as new articles are released. New records were added during 2023, and by the end of the year, the CABI Scientific Outputs held 7,519 records, an increase from 7,282 records at the end of 2022.

Effective scientific reporting mechanisms

The CABI Science Strategy recognizes the need for a record of work to monitor publications, reports, talks and posters presented, research students and major scientific contributions. This annual science report provides the primary record of all these scientific outputs (Sections 2 and 3). In addition, an internal publications pipeline is in use which enables the progress of all staff publications to be monitored from concept to publication.

Public relations support for CABI's scientific papers published in 2023

The CABI communications team supports its scientists with a full range of public relations (PR), marketing and design functions including the drafting and issuing of press releases using the EurekAlert! and AlphaGalileo platforms and databases, the writing of news stories for [CABI News](#), the writing of blogs for the [CABI Blog](#), [Invasives Blog](#) and [PlantwisePlus Blog](#), as well as writing thought leadership articles for placement in external media. Social media posts are made on CABI's News, Invasives and PlantwisePlus X (formerly known as Twitter) accounts, and the CABI Facebook and LinkedIn accounts (linking to the news stories on CABI's website and/or the paper).

During 2023, the CABI communications team provided PR support for 18 papers. These were selected based on CABI's role, the impact of the journal and the perceived newsworthiness of the science published. For these 18 papers, a total of 346 items of media coverage were generated, with combined estimated views of over 2.7 million.

The three papers with the most media coverage achieved were:

Eschen, R., Kadzamira, M., Stutz, S., Ogunmodede, A., Djedjour, D., Shaw, R., Pratt, C., Varia, S., Constantine, K. and Williams, F. (2023) An updated assessment of the direct costs of invasive non-native species to the United Kingdom. *Biological Invasions* 25(10), 3265–3276. <https://doi.org/10.1007/s10530-023-03107-2>

210 items of coverage and estimated views of 2.34 million.

Li, H., Zhu, J., Cheng, Y., Zhuso, F., Liu, Y., Huang, J., Taylor, B., Luke, B., Wang, M. and González-Moreno, P. (2023) Daily activity patterns and body temperature of the Oriental migratory locust, *Locusta migratoria manilensis* (Meyen), in natural habitat. *Frontiers in Physiology* 14, 1110998, 10 pp. <https://doi.org/10.3389/fphys.2023.1110998>

14 items of coverage and estimated views of 45,000.

Kadzamira, M.A.T.J., Ogunmodede, A., Duah, S., Romney, D., Clottey, V.A. and Williams, F. (2023) African agri-entrepreneurship in the face of the COVID-19 pandemic. *CABI Agriculture and Bioscience* 4, 16, 9 pp. <https://doi.org/10.1186/s43170-023-00157-3>

14 items of coverage and estimated views of 42,000.

Research students (MSc, PhD, etc.) and interns (summer students)

In 2023, we hosted 36 research students (Section 4.3, 18 MSc and 18 PhD) and 29 interns, of whom 14 were at CABI in Pakistan (Section 4.8).

Strategically important scientific review/synthesis papers published

The CABI Science Strategy calls for CABI staff to be involved in the publication of strategically important scientific review/synthesis papers. Examples from 2023 in which CABI staff took a lead include:

Colmenarez, Y.C., Smith, D., Cabrera Walsh, G., Frances, A., **Corniani, N.** and Vásquez, C. (2023)

Regulatory frameworks for the access and use of genetic resources in Latin America.

Neotropical Entomology 52(2), 333–344. <https://doi.org/10.1007/s13744-022-01017-x>

Eschen, R., Kadzamira, M., Stutz, S., Ogunmodede, A., Djedjour, D., Shaw, R., Pratt, C.,

Varia, S., Constantine, K. and **Williams, F.** (2023) An updated assessment of the direct costs of

invasive non-native species to the United Kingdom. *Biological Invasions* 25(10), 3265–3276. <https://doi.org/10.1007/s10530-023-03107-2>

Franić, I., Allan, E., Prospero, S. and 80 co-authors including **Kenis, M., Li, H.** and **Eschen, R.** (2023) Climate, host and geography shape insect and fungal communities of trees. *Scientific Reports* 13, 11570, 13 pp. <https://doi.org/10.1038/s41598-023-36795-w>

Kenis, M. (2023) Prospects for classical biological control of *Spodoptera frugiperda* (Lepidoptera: Noctuidae) in invaded areas using parasitoids from the Americas. *Journal of Economic Entomology* 116(2), 331–341. <https://doi.org/10.1093/jee/toad029>

Kenis, M., Benelli, G., Biondi, A., Calatayud, P.-A., **Day, R.**, Desneux, N., Harrison, R.D., Kriticos, D., **Rwomushana, I.**, van den Berg, J., Verheggen, F., Zhang, Y.-J., **Agboyi, L.K.**, Ahissou, R.B., Ba, M.N., Bernal, J., Bueno, A.F., Carrière, Y., Carvalho, G.A., Chen, X.-X., Cicero, L., du Plessis, H., Early, R., Fallet, P., Fiaboe, K.K.M., Firake, D.M., Goergen, G., Groot, A.T., Guedes, R.N.C., Gupta, A., Hu, G., Huang, F.N., Jaber, L.R., Malo, E.A., McCarthy, C.B., Meagher, R.L. Jr, Mohamed, S., Sanchez, D.M., Nagoshi, R.N., Nègre, N., Niassy, S., Ota, N., Nyamukondiwa, C., Omoto, C., Palli, S.R., Pavela, R., Ramirez-Romero, R., Rojas, J.C., Subramanian, S., Tabashnik, B.E., Tay, W.T., Virla, E.G., Wang, S., Williams, T., Zang, L.-S., Zhang, L. and Wu, K. (2023) Invasiveness, biology, ecology, and management of the fall armyworm, *Spodoptera frugiperda*. *Entomologia Generalis* 43(2), 187–241. <https://doi.org/10.1127/entomologia/2022/1659>

Ryan, M.J., Mauchline, T.H., Malone, J.G., Jones, S., Thompson, C.M.A., **Bonnin, J.M., Stewart, H.**, Yau, P.T.O., Taketani, R.G., Clark, I.M. and Holden, N. (2023) The UK Crop Microbiome Cryobank: a utility and model for supporting Phytobiomes research. *CABI Agriculture and Bioscience* 4, 53, 6 pp. <https://doi.org/10.1186/s43170-023-00190-2>

Seier, M.K., Rapini, A., **Pollard, K.M.**, Barreto, R.W. and **Evans, H.C.** (2023) Tracing the origins and tracking the movements of invasive rubber vines (*Cryptostegia* spp., Apocynaceae). *NeoBiota* 89, 95–133. <https://doi.org/10.3897/neobiota.89.109180>

Smith, D., Ryan, M.J. and Buddie, A.G. (2023) *The Role of Digital Sequence Information in the Conservation and Sustainable Use of Genetic Resources for Food and Agriculture: Opportunities and Challenges*. Background Study Paper No. 73. FAO Commission on Genetic Resources for Food and Agriculture, Rome, 80 pp. <https://doi.org/10.4060/cc8502en>

Weyl, P.S.R., Hinz, H.L., Rwomushana, I., Mulema, J., Diaz-Soltero, H. and Smith, D. (2023)

Building trust for sustainable access and benefit-sharing of biological control genetic resources: a CABI case study. *BioControl* 68(3), 291–297. <https://doi.org/10.1007/s10526-023-10200-x>

Contributions of CABI staff to publications in which authors are not listed

CABI staff contributed to the following publications through technical input or contributions:

EPPO (2023) PM 6/5 (1) Host specificity testing of non-indigenous (classical) biological control agents used against invasive alien plants. *EPPO Bulletin* 53, 480–490. <https://doi.org/10.1111/epp.12954> [S. Thomas, P. Weyl, S. Varia, contributions].

FAO (2023) *How to Use Antimicrobials Effectively and Responsibly in Plant Production, For the Sake of Human and Plant Health*. Food and Agriculture Organization of the United Nations, Rome. DOI: 10.4060/cc8064en [P. Taylor, technical input].

FAO (2023) *Guide on Digital Agricultural Extension and Advisory Services – Use of Smartphone Applications by Smallholder Farmers*. Food and Agriculture Organization of the United Nations, Rome. <https://doi.org/10.4060/cc4022en> [M. Wan, F. Zhang, M. Thakur, C. Curry, Y. Colmenarez and S.S. Thanarajoo, contributions].

WHO, FAO, UNEP and WOAH (2023) *A One Health Priority Research Agenda for Antimicrobial Resistance*. World Health Organization, Food and Agriculture Organization of the United Nations, United Nations Environment Programme and World Organisation for Animal Health, Geneva. Available at: <https://iris.who.int/bitstream/handle/10665/370279/9789240075924-eng.pdf?sequence=1> [A. Morrow and P. Taylor, contributions].

The BIOCAT database

CABI's BIOCAT is a database documenting all deliberate introductions of insects for the biological control of insect pests since the 1890s. In 2023, work continued to update the database to include literature to the end of 2020. In late 2023, a proof-of-concept project was carried out, with the aim of developing a Generative AI tool that could interrogate the BIOCAT data and output text or graphical responses for potential internal and external interest. This resulted in a prototype which will be further evaluated in the context of its functionality in 2024. The overall aim is to make the BIOCAT database openly available through a link in the CABI BioProtection Portal.



2. Scientific outputs

2.1. Honours, honorary roles

Location	Name	Honour/role	Date(s)
Austria	Valverde, Alvaro	Member of the Steering Committee of AGRA's Agribusiness Deal Room	From 2020
Austria	Valverde, Alvaro	Member of the Steering Committee of the Agri-SME Learning Collective, funded by Small Foundation	From 2023
Brazil	Colmenarez, Yelitza	Member of the Steering Committee of the International Organisation for Biological Control – Neotropical Regional Section	From 2010
China	Li, Hong-Mei	Adjunct Professor, Chinese Academy of Agricultural Sciences – Institute of Plant Protection	From 2019
China	Li, Hong-Mei	Master student supervisor, Beijing University of Agriculture	From 2019
China	Wan, Min	Adjunct Professor, Chinese Academy of Agricultural Sciences – Institute of Plant Protection	From 2023
China	Zhang, Feng	Adjunct Professor, Chinese Academy of Agricultural Sciences – Institute of Plant Protection	From 2013
China	Zhang, Feng	Associate Member, International Tropical Fruits Network (TFNet) Board of Trustees	From 2022
China	Zhang, Feng	Member, Academic Committee, Key Laboratory of Natural Enemy Insects, Chinese Ministry of Agriculture and Rural Affairs	From 2022
China	Zhang, Feng	Co-convenor, International Working Group on Ostrinia and other maize pests (IWGO)	From 2023
China	Zhang, Feng	Vice Chair, ASEAN FAW Taskforce	From 2023
China	Zhang, Jin-Ping	Adjunct Professor, Jilin Agricultural University	From 2018
China	Zhang, Jin-Ping	Adjunct Professor, Yangtze University	From 2021
China	Zhang, Jin-Ping	Senior Agronomist, Beijing Human Resources and Social Security Bureau	From 2021
Ethiopia	Gurmessa, Negussie	Member of National Advisory Committee for Plant Protection Roadmap of Ethiopia	From 2023
Global	Day, Roger	Member of the International Plant Protection Convention Steering Committee on Pest Outbreak Alert and Response Systems	From 2023
Hungary	Toepfer, Stefan	Adjunct Professor and member of plant science PhD school, Plant Protection Institute, Hungarian University of Agriculture and Life Sciences MATE (formerly Szent Istvan University), Godollo, Hungary	From 2012
Hungary	Toepfer, Stefan	Visiting Professorship, Chinese Academy of Agricultural Sciences – Institute of Plant Protection	From 2015
India	Chaudhary, Malvika	National Advisory Committee, TNAU, Coimbatore, India	From 2020
India	Pandit, Vinod	IPPC working group to develop guidelines for implementation of ISPM 15	From 2020
India	Pandit, Vinod	IPPC working group to develop IPPC guide of wood packaging material	From 2021
Kenya	Rwomushana, Ivan	Member of the Locust Drone Technology Advisory Group	From 2022
Kenya	Oronje, MaryLucy	Member of the STDF P-IMA Practitioner Group	From 2020
Kenya	Oronje, MaryLucy	Member to the Minor Crops Technical Working Group for Kenya	From 2023
Kenya	Oronje, MaryLucy	Member to the Technical Working Group on Plant Protection Products for Trade for Kenya	From 2023
Malaysia	Annamalai, Sivapragasam	Member of Panel of Reviewers, The Planter journal of the Incorporated Society of Planters, Malaysia	Ongoing

Location	Name	Honour/role	Date(s)
Malaysia	Annamalai, Sivapragasam	Member, Editorial Board, Vietnam Academy of Agricultural Sciences	Ongoing
Malaysia	Annamalai, Sivapragasam	Member, International Advisory Board, Journal of Tropical Agriculture and Food Science (JTAFS), MARDI	Ongoing
Pakistan	Farooq, Muzammil	Global Outreach Member, American Society of Microbiology (ASM)	From 2015
Switzerland	Babendreier, Dirk	Visiting Professorship, Chinese Academy of Agricultural Sciences – Institute of Plant Protection	From 2018
Switzerland	Eschen, René	Member of the International Forest Quarantine Research Group	From 2010
Switzerland	Eschen, René	Coordinator, Working Group 7.03.12 – Alien invasive species and international trade, International Union of Forest Research Organizations (IUFRO)	From 2014
Switzerland	Haye, Tim	Member of the Swiss Committee for Biosafety	From 2015
Switzerland	Haye, Tim	Member of the PhD Council in Agri-Food Sciences, Technologies and Bio-Technologies (STEBA), University of Modena and Reggio Emilia (UNIMORE), Italy	From 2019
Switzerland	Hinz, Hariat	Affiliated Professor, Department of Plant, Soil and Entomological Sciences, University of Idaho, USA	From 2002
Switzerland	Hinz, Hariat	Member of the IOBC Global Commission on Access and Benefit Sharing	From 2021
Switzerland	Hinz, Hariat	Chair of the Global IOBC Working Group on Classical Weed Biological Control	From 2023
Switzerland	Hinz, Hariat	Member of the Inter-Agency Liaison Group on Invasive Alien Species under the CBD	From 2022
Switzerland	Kenis, Marc	Member of the Scientific Committee of the Swiss Biological Records Center	From 2012
Switzerland	Kuhlmann, Ulrich	Convenor, International Working Group of Ostrinia and other maize pests (IWGO) – a global working group of the International Organisation for Biological Control	From 2005
Switzerland	Kuhlmann, Ulrich	Visiting Professorship, Chinese Academy of Agricultural Sciences – Institute of Plant Protection	From 2013
Switzerland	Kuhlmann, Ulrich	Member, International Advisory Board of the Chinese Academy of Agricultural Sciences – Institute of Plant Protection, China	From 2018
Switzerland	Schaffner, Urs	Affiliated Professor, Department of Plant, Soil and Entomological Sciences, University of Idaho, USA	From 2008
Switzerland	Seehausen, Lukas	Deputy Coordinator, Working Group 7.03.13 – Biological control of forest insects and pathogens, International Union of Forest Research Organizations (IUFRO)	From 2020
Switzerland	Weyl, Philip	Affiliated Professor, Department of Plant, Soil and Entomological Sciences, University of Idaho, USA	From 2020
Switzerland	Weyl, Philip	Chair of the biological control committee for the North American Invasive Species Management Association	From 2020
Switzerland	Weyl, Philip	Member of the IOBC Global Commission on Access and Benefit Sharing	From 2021
Trinidad and Tobago	Ramnanan, Naitram	Chair, Regional Pest Prioritization Technical Working Group of the Caribbean Plant Health Directors Forum (CPHD)	From 2014
Trinidad and Tobago	Ramnanan, Naitram	Member of the Regional Project Steering Committee: Strengthening Coastal and Marine Climate Resilience through Upland and Coastal Ecosystem Based Adaptation and Country Engagement	From 2021
UK	Buddie, Alan	Member Cup-fungi, Truffles and their Allies SSC Specialist Group (International Union for Conservation of Nature)	Ongoing

Location	Name	Honour/role	Date(s)
UK	Buddie, Alan	Member Steering Committee Darwin Tree of Life Project	From 2022
UK	Cock, Matthew	Honorary Life Member of the International Organisation for Biological Control	From 2015
UK	Cock, Matthew	Member Invasive Species Specialist Group (International Union for Conservation of Nature)	Ongoing
UK	Djedدور, Djami	Honorary Lecturer in the School of Biological Sciences, Royal Holloway, University of London	From 2016
UK	Edgington, Steve	Visiting Research Fellow, Reading University	From 2016
UK	Edginton, Steve	Convenor for the Association of Applied Biologists, Nematology division	2015–2023
UK	Edginton, Steve	Programme Secretary for the Association of Applied Biologists	From 2023
UK	Flood, Julie	Fellow of the Royal Society for Biology	From 2014
UK	Flood, Julie	Honorary Life Member of the British Society of Plant Pathology	From 2018
UK	Murphy, Sean	Honorary Lecturer in the School of Biological Sciences, Royal Holloway, University of London	From 2016
UK	Neave, Suzanne	STDF Working Group	From 2021
UK	Pratt, Corin	Invited lecturer, Harper Adams University, UK	From 2022
UK	Reeder, Rob	Editor of New Disease Reports, BSPP publication	From 2015
UK	Ryan, Matthew	Board of Directors, International Alliance for Phytobiomes Research	From 2019
UK	Ryan, Matthew	Member of KTN Microbiome Steering Advisory Group & Lead, Microbiome Biobanking	From 2019
UK	Ryan, Matthew	Member of BBSRC EDI Expert Advisory Group	From 2021
UK	Ryan, Matthew	Committee – United States Culture Collection Network (USCCN)	From 2022
UK	Seier, Marion	Lead of the European Weed Research Society Working Group Biological Control	From 2023
UK	Shaw, Richard	Member Invasive Species Specialist Group (International Union for Conservation of Nature)	From 2014
UK	Shaw, Richard	Member of the European Commission Expert Working Group on Invasive Alien Species	From 2014
UK	Shaw, Richard	Science Advisory Board Member for the UK Animal and Plant Health Agency	From 2019
UK	Shaw, Richard	Fellow of the Royal Society for Biology	From 2022
UK	Smith, David	Fellow of the Royal Society for Biology	From 2011
UK	Taylor, Phil	Editor of New Disease Reports, BSPP publication	From 2015
UK	Taylor, Phil	Member of the Quadripartite Technical Group on Antimicrobial Resistance and Use Integrated Surveillance (QTG-AIS) of the Quadripartite Joint Secretariat on Antimicrobial Resistance (AMR)	2022–2026
UK	Taylor, Phil	Member of the FAO working party on Antibiotic use in crop production	From 2023
Zambia	Kasoma, Chapwa	Vice Chairperson of the Scientific Advisory Committee of the National Biosafety Authority in Zambia	From 2023
Zambia	Kasoma, Chapwa	Member of the Institutional Biosafety Committee of the Centre for Infectious Disease Research in Zambia	From 2023

2.2. Support to international scientific meetings

CABI staff have played significant roles in the organization of several scientific meetings in 2023:

Meeting	Staff member	Role
3rd African Plant Breeders Association (APBA) Conference, 23–26 October 2023, UM6P in Benguerir, Morocco	Chapwa Kasoma	Member of the organizing committee
4th Conference on Remote Sensing of Vegetation Pests and Diseases, 18–20 August 2023, Hohhot, China	Hongmei Li	Session organizer
4th International Phytosanitary Conference, 18–21 September 2023, Nairobi, Kenya	Joseph Mulema	Liaison between CABI and KEPHIS
XII European Congress of Entomology, 16–20 October 2023, Heraklion, Crete, Greece	Anna Szyniszewska	Organizing committee
XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina	Marion Seier, Djamilia Djeddour Marion Seier	Members scientific committee Session moderator
17 Simpósio de Controle Biológico (Siconbiol), 23–27 July 2023, Juazeiro-Petrolina, Brazil	Yelitza Colmenarez	Session organizer/session moderator/member scientific committee
28th International Working Group on Ostrinia and other maize pests (IWGO) Conference, 2–4 May 2023, KEPHIS Conference Centre, Nairobi, Kenya	Ulrich Kuhlmann Marc Kenis, Ulrich Kuhlmann, Feng Zhang	Convenor Scientific session organizers
Advances in Nematology 2023, Association of Applied Biologists, 7 December 2023, London, UK	Steve Edgington	Chair/organizing committee
CropLife International Festival of Stewardship, 14–15 March 2023 (webinar)	Melanie Bateman	Panellist
Entomological Society of America Annual Meeting, 5–8 November 2023, National Harbor, Maryland, USA	Yelitza Colmenarez	Session organizer/session moderator
FAO Global Symposium on Sustainable Fall Armyworm Management, 31 October–2 November 2023, Beijing, China	Frances Williams	Member of organizing committee/session vice-chair/keynote speaker
International Symposium on Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, Yunnan, China	Daniel Elger Feng Zhang, Ulrich Kuhlmann Stefan Toepfer Hongmei Li	Vice chairman Members of organizing committee Session chair Secretariat
International Symposium on Tropical Fruits (ISTF), 21–23 November 2023, Guangzhou, China	Sathis Sri Thanarajoo Feng Zhang	Co-organizer/scientific committee Steering committee member
IPM Task Force meeting for Sustainable Management of Tea Pest in Assam with Rainforest Alliance and its partners, 12–13 February 2023, Vishakhapatnam, India	Malvika Chaudhary	Task force member
KTN Microbiome One Health, 23–24 March 2023, Strathclyde, Scotland	Matthew Ryan	Panel chair/organizing committee
Workshop ‘CABI BioProtection Portal – making biocontrol accessible to growers’, 18th Annual Biocontrol Industry Meeting (ABIM), 23–25 October 2023, Congress Center Basel, Switzerland	Emma Jenner, Ulrich Kuhlmann	Workshop organizers
Workshop ‘Diversifying Business models for Biocontrol Deployment’, 31 May–2 June 2023, Paris, France	Marc Kenis, Lukas Seehausen	Scientific session organizers

2.3. Journal contributions

CABI staff acted on the editorial boards of the following journals in 2023:

- *Agriculture* – Special Issue on ‘Advances in Plant Pathogens for Biological Control of Weeds’ (D. Kurose – Guest Editor)
- *BioControl* (D. Babendreier)
- *Biological Conservation* – Special Edition on ‘The Conservation Threats of Wire Snares’ (T. Mudumba)
- *Biology Methods and Protocols* (M. Reeve)
- *Brazilian Journal of Forestry and Environment* (N. Corniani)
- *CABI Agriculture and Bioscience* (R. Eschen, M. Kansiime, M. Ryan, J. Tambo, F. Zhang)
- *CABI Agriculture and Bioscience* – Special Edition on ‘Gender and Agriculture’ (F. Williams, S. Khan, B. Terefe – Guest Editors)
- *CAB Reviews* (M.J.W. Cock)
- *Chilean Journal of Agricultural Research* (S. Edgington)
- *European Journal of Plant Pathology* (A. Szyniszewska)
- *Frontiers in Horticulture* (F. Zhang)
- *Frontiers in Insect Science* (T. Haye)
- *Frontiers in Remote Sensing* (H. Li)
- *International Journal of Pest Management* (M. Kansiime)
- *Journal of Applied Entomology* (S. Toepfer)
- *Journal of Asia Pacific Entomology* (A. Sivapragasam)
- *Journal of Insects as Food and Feed* (M. Kenis)
- *Journal of Oil Palm Research* (J. Flood)
- *Journal of Pest Science* (T. Haye)
- *Journal of Vietnam Agricultural Science and Technology* (A. Sivapragasam)
- *NeoBiota* (R.H. Shaw)
- *Neotropical Entomology* (Y. Colmenarez)
- *New Disease Reports* (A. Buddie, J. Crozier, R. Reeder, P. Taylor)
- *The Planter* (A. Sivapragasam)
- *The Tropical Agriculturist* (V. Pandit)

CABI staff were also involved in reviewing more than 200 papers for journals as follows:

- *African Journal of Ecology*
- *African Journal of Food, Agriculture, Nutrition and Development (AJFAND)*
- *Agrekon*
- *Agriculture*
- *Agronomy*
- *Agronomy Journal*
- *BioControl*
- *Biocontrol Science and Technology*
- *BioInvasions Records*

- *Biological Conservation*
- *Biological Control*
- *Biological Invasions*
- *Biology Methods and Protocols*
- *CABI Agriculture and Bioscience*
- *Cereal Research Communications*
- *Circular Agricultural Systems*
- *Climate and Development*
- *Communication Biology*
- *Cotton Science*
- *Crop Protection*
- *Data in Brief*
- *Development in Practice*
- *Drone Technology*
- *Ecography*
- *Ecology and Evolution*
- *Economic Entomology*
- *Entomologia Experimentalis et Applicata*
- *Entomologia Generalis*
- *Environmental and Experimental Biology*
- *European Journal of Plant Pathology*
- *Farming Systems*
- *Faunitaxys*
- *Field Crops Research*
- *Floresta e Ambiente*
- *Food Policy*
- *Forest Policy and Economics*
- *Frontiers in Insect Science*
- *Frontiers in Nutrition*
- *Geology, Ecology, and Landscapes*
- *Global Environmental Change*
- *Heliyon*
- *Industrial Crops and Products*
- *Insects*
- *International Journal of Pest Management*
- *International Journal of Plant, Animal and Environmental Sciences*
- *International Journal of Tropical Insect Science*
- *Invasive Plant Science and Management*
- *Journal for Nature Conservation*
- *Journal of Cotton Research*
- *Journal of Agricultural Education and Extension*

- *Journal of Agriculture, Food Systems and Community Development*
- *Journal of Applied Entomology*
- *Journal of Applied Life Sciences and Environment*
- *Journal of Cleaner Production*
- *Journal of Environmental Management*
- *Journal of Hebei Normal University*
- *Journal of Integrative Agriculture*
- *Journal of Natural Pesticides Research*
- *Journal of Pest Science*
- *Journal of Plant Growth Regulation*
- *Journal of Plant Nutrition*
- *Journal of Rural Studies*
- *Journal of Soil Science and Plant Nutrition*
- *Journal of Visualized Experiments*
- *NeoBiota*
- *Neotropical Entomology*
- *New Disease Reports*
- *One Earth*
- *Peer J*
- *Pest Management Science*
- *Phytoparasitica*
- *Plant and Soil*
- *Plants*
- *PLoS ONE*
- *Qeios*
- *Review of the Economics of the Household*
- *Science of the Total Environment*
- *Scientific Reports*
- *Society and Natural Resources*
- *South African Journal of Botany*
- *Summa Phytopathologica*
- *The Lancet Planetary Health*
- *Transactions of the Royal Society of South Africa*
- *Tropical Conservation Science*
- *Tropical Lepidoptera Research*
- *World Development*
- *World Development Perspectives*
- *World Sustainability*
- *Zootaxa*



2.4. Publications

CABI authors are shown in **bold**, the corresponding author(s) where designated are underlined, 'IF>2' refers to papers in journals with a 2022 impact factor greater than 2.0, and an open access symbol is placed at the end of all open access publications.

2.4.1. Books, proceedings and manuals (8)

Bateman, R. and **Crozier, J.** (2023) *Pesticide Use in Cocoa. Practical Manual*, 4th edn. International Cocoa Organization (ICCO), Abidjan, Côte d'Ivoire, 133 pp. <https://www.icco.org/icco-documentation/pesticide-use-in-cocoa-practical-manual-fourth-edition/#download> Ⓢ

Buitenhuis, R., **Cock, M.J.W.**, **Colmenarez, Y.C.**, De Clercq, P., **Edgington, S.**, Gadaleta, P., Gwynn, R., Heimpel, G., Hill, M., **Hinz, H.L.**, Hoddle, M.S., Jäkel, T., Klapwijk, J.N., Leung, K., McKay, F., Messelink, G.J., Silvestri, L., **Smith, D.**, Sosa, A., Wackers, F.L., Cabrera Walsh, G., Wyckhuys, K.A.G. and Zaviezo, T. (2023) *Sustainable Use and Conservation of Microbial and Invertebrate Biological Control Agents and Microbial Biostimulants*. Background Study Paper No. 71. FAO Commission on Genetic Resources for Food and Agriculture, Rome, xviii + 102 pp. <https://www.fao.org/3/cc3571en/cc3571en.pdf> Ⓢ

Crozier, J. (2023) *Guidelines for Isolation and Identification of Fusarium oxysporum f. sp. cubense Tropical Race 4 from Banana*. CAB International, Wallingford, UK, 28 pp. https://caribbeaninvasives.org/wp-content/uploads/2023/11/Foc-TR4-Guidelines-for-sampling-and-isolation_FINAL_05.10.23.pdf Ⓢ

Lonsdale, O., **Murphy, S.T.** and Scheffer, S.J. (2023) *Agromyzidae (Diptera) Plant Pests*. Advanced Books, iv + 110 pp. <https://doi.org/10.3897/ab.e108410> Ⓢ

Smith, D., Ryan, M.J. and **Buddie, A.G.** (2023) *The Role of Digital Sequence Information in the Conservation and Sustainable Use of Genetic Resources for Food and Agriculture: Opportunities and Challenges*. Background Study Paper No. 73. FAO Commission on Genetic Resources for Food and Agriculture, Rome, 80 pp. <https://doi.org/10.4060/cc8502en> Ⓢ

Smith, D., Ryan, M.J. and **Buddie, A.G.** (2023) *Managing Microorganisms*. CAB International, Wallingford, UK, xxxiii + 471 pp. <https://doi.org/10.1079/9781800622135.0000>

Witt, A. (2023) *Guide to the Naturalized and Invasive Plants of the Caribbean*. CAB International, Wallingford, UK, vi + 384 pp. <https://doi.org/10.1079/9781800623453.0000> [Will be published as an open access e-book in 2024]. Ⓢ

Witt, A. and Suleiman, A.S. (2023) *Guide to the Naturalized, Invasive and Potentially Invasive Plants of Socotra, Yemen*. CAB International, Wallingford, UK, vi + 230 pp. <https://doi.org/10.1079/9781800623422.0000> [Will be published as an open access e-book in 2024]. Ⓢ

2.4.2. Peer-reviewed papers (132)

Abad Robledo, C., Bieri, S., **Eschen, R.**, Fuerst, S., Jacobi, J., Jiménez, E., Zonta, A.L., Naughton, M., **Schaffner, U.**, Winkler, M.S. and Flury, M. (2023) Promising practices for dealing with complexity in research for development. *GAIA – Ecological Perspectives for Science and Society* 32(1), 115–124. <https://doi.org/10.14512/gaia.32.1.8> Ⓢ

Abram, P.K., Guerra-Grenier, E., Brodeur, J., Capko, C., Ferreira Santos Aquino, M., Beers, E.H., Blassioli-Moraes, M.C., Borges, M., Cingolani, M.F., Cusumano, A., De Clercq, P., Fernandez, C.A., Gariepy, T.D., **Haye, T.**, Hoelmer, K., Laumann, R.A., Lietti, M., McPherson, J.E., Punschke, E., Saunders, T.E., **Zhang, J.-P.** and Hardy, I.C.W. (2023) Protective geometry and reproductive anatomy as candidate determinants of clutch size variation in pentatomid bugs. *The American Naturalist* 202(4), 17 pp. <https://doi.org/10.1086/725917> IF>2

Abram, P.K., **Haye, T.**, Clarke, P., Grove, E., Thiessen, J. and Gariepy, T.D. (2023) Partial refuges from biological control due to intraspecific variation in protective host traits. *Ecological Applications* 33(4), e2796, 16 pp. <https://doi.org/10.1002/eap.2796> IF>2

- Abram, P.K., Nelson, T.D., Marshall, V., Gariepy, T.D., **Haye, T.**, **Zhang, J.**, Hueppelsheuser, T., Acheampong, S. and Moffat, C.E. (2023) Genetic relationships among laboratory lines of the egg parasitoid *Trissolcus japonicus* from native and adventive populations. *NeoBiota* 82, 145–161. <https://doi.org/10.3897/neobiota.82.97881> IF>2 ⚡
- Acheampong, M.A., Cornelius, E.W., Eziah, V.Y., Fening, K.O., Ofori, K.O., Storm, C., Jessop, N., **Luke, B.**, Moore, D., **Clottey, V.A.**, Potin, O. and Grammare, P. (2023) Efficacy of *Beauveria bassiana* against adults of *Prostephanus truncatus* (Horn), *Sitophilus zeamais* Motschulsky and *Teretrius nigrescens* Lewis in stored maize. *African Entomology* 31, e11734, 7 pp. <https://doi.org/10.17159/2254-8854/2023/a11734> ⚡
- Agboyi, L.K.**, Nboyine, J.A., Asamani, E., Beseh, P., Badii, B.K., **Kenis, M.** and **Babendreier, D.** (2023) Comparative effects of biopesticides on fall armyworm management and larval parasitism rates in northern Ghana. *Journal of Pest Science* 96(4), 1417–1428. <https://doi.org/10.1007/s10340-023-01590-z> IF>2 ⚡
- Ali, M.Y.**, Liu, Y.-D., Li, F.-Q., **Zhang, J.-P.** and **Zhang, F.** (2023) Molecular identification of the brown marmorated stink bug's egg parasitoids by species-specific PCR collected from Beijing, China. *CABI Agriculture and Bioscience* 4, 41, 10 pp. <https://doi.org/10.1186/s43170-023-00179-x> IF>2 ⚡
- Ali, M.Y.**, Naseem, T., Holopainen, J.K., Liu, T., **Zhang, J.** and **Zhang, F.** (2023) Tritrophic interactions among arthropod natural enemies, herbivores and plants considering volatile blends at different scale levels. *Cells* 12(2), 251, 22 pp. <https://doi.org/10.3390/cells12020251> IF>2 ⚡
- Ariza-Salamanca, A.J., Navarro-Cerrillo, R.M., Quero-Pérez, J.L., Gallardo-Marmas, B., **Crozier, J.**, Stirling, C., de Sousa, K. and González-Moreno, P. (2023) Vulnerability of cocoa-based agroforestry systems to climate change in West Africa. *Scientific Reports* 13, 10033, 12 pp. <https://doi.org/10.1038/s41598-023-37180-3> IF>2 ⚡
- Augustinus, B.A.**, Nussbaum, N., Yair, Y., Harari, A., Yaacoby, T., Müller-Schärer, H., **Schaffner, U.** and Rubin, B. (2023) *Epiblema minutana* (Lepidoptera, Tortricidae) in Israel: promise or peril? *Management of Biological Invasions* 14(1), 98–106. https://www.reabic.net/journals/mbi/2023/1/MBI_2023_Augustinus_etal.pdf ⚡
- Avila, G.A., **Seehausen, M.L.**, Lesieur, V., Chhagan, A., Caron, V., Down, R.E., Audsley, N., Collatz, J., Bukovinszki, T., Sabbatini Peverieri, G., Tanner, R., Maggini, R., Milonas, P., McGee, C.F., Horrocks, K., Herz, A., Lemanski, K., Anfora, G., Batistič, L., Bohinc, T., Borowiec, N., Dinu, M., Fatu, A.-C., Ferracini, C., Giakoumaki, M.-V., Ioriatti, C., **Kenis, M.**, Laznik, Ž., Malumphy, C., Rossi Stacconi, M.V., Roversi, P.F., Trdan, S. and Barratt, B.I.P. (2023) Guidelines and framework to assess the feasibility of starting pre-emptive risk assessment of classical biological control agents. *Biological Control* 187, 105387, 14 pp. <https://doi.org/10.1016/j.biocontrol.2023.105387> IF>2 ⚡
- Bajwa, A.A., **Nawaz, A.**, Farooq, M., Chauhan, B.S. and Adkins, S. (2023) Herbicide program to control *Parthenium hysterophorus* in grain sorghum in an arid environment. *Crops* 3(4), 292–301. <https://doi.org/10.3390/crops3040026> ⚡
- Boafo, H.A.**, Gbemavo, D.S.J.C., Timpong-Jones, E.C., Eziah, V., Billah, M., Chia, S.Y., Aidoo, O.F., **Clottey, V.A.** and **Kenis, M.** (2023) Substrates most preferred for black soldier fly *Hermetia illucens* (L.) oviposition are not the most suitable for their larval development. *Journal of Insects as Food and Feed* 9(2), 183–192. <https://doi.org/10.3920/JIFF2022.0034> IF>2 ⚡
- Borokini, I.T., Kortz, A., Anibaba, Q.A., **Witt, A.**, Aigbokhan, E.I., Hejda, M. and Pyšek, P. (2023) Alien flora of Nigeria: taxonomy, biogeography, habitats, and ecological impacts. *Biological Invasions* 25(12), 3677–3696. <https://doi.org/10.1007/s10530-023-03140-1> IF>2 ⚡
- Bueno, A.F.**, Sutil, W.P., Jahnke, S.M., Carvalho, G.A., Cingolani, M.F., **Colmenarez, Y.C.** and **Corniani, N.** (2023) Biological control as part of the soybean integrated pest management (IPM): potential and challenges. *Agronomy* 13(10), 2532, 18 pp. <https://doi.org/10.3390/agronomy13102532> IF>2 ⚡
- Bueno, A.F.**, Sutil, W.P., Maciel, R.M.A., Roswadoski, L., **Colmenarez, Y.C.** and Colombo, F.C. (2023) Challenges and opportunities of using egg parasitoids in FAW augmentative biological control in Brazil. *Biological Control* 186, 105344, 14 pp. <https://doi.org/10.1016/j.biocontrol.2023.105344> IF>2

Cabrera Walsh, G., Sosa, A.J., McKay, F., Maestro, M., Hill, M., **Hinz, H.L.**, Paynter, Q., Pratt, P.D., Raghu, S., **Shaw, R.**, Tipping, P.W. and Winston, R.L. (2023) Is biological control of weeds conservation's blind spot? *The Quarterly Review of Biology* 98(1), 1–28. <https://doi.org/10.1086/723930> IF>2

Chin Sue Min, M., Gosula, V.S., Maharaj, T.P., Morales, J.F., **Yeap, Y.T.** and **Cock, M.J.W.** (2023) iNaturalist observations document the biology of *Napata terminalis* (Walker) in Trinidad, West Indies (Lepidoptera, Erebidae, Arctiinae, Arctiini, Ctenuchina). *Living World, Journal of the Trinidad and Tobago Field Naturalists' Club* 2023, 169–171. <https://ttfnc.org/livingworld/index.php/lwj/article/view/chinsuem2023> Ⓢ

Chouangthavy, B., Bouattavong, K., Louangphan, J., Phewphanh, P., Sibounnavong, P. and **Babendreier, D.** (2023) Diversity of beetle family Curculionidae and Bostrichidae (Coleoptera) in two national protected areas in Lao PDR. *Proceedings of the Zoological Society* 76(3), 347–353. <https://doi.org/10.1007/s12595-023-00500-6>

Cock, M.J.W. (2023) Elf moths (Lepidoptera, Euteliidae) of Trinidad & Tobago. *Living World, Journal of the Trinidad and Tobago Field Naturalists' Club* 2023, 84–98. <https://ttfnc.org/livingworld/index.php/lwj/article/view/cock2023a/article> Ⓢ

Cock, M.J.W., Day, M.D. and Winston, R.L. (2023) Citizen science to monitor the establishment and spread of a biological control agent: the case of *Pareuchaetes pseudoinsulata* (Lepidoptera, Erebidae) for the control of *Chromolaena odorata* (Asteraceae) in South and South-East Asia. *CABI Agriculture and Bioscience* 4, 25, 6 pp. <https://doi.org/10.1186/s43170-023-00171-5> IF>2 Ⓢ

Cock, M.J.W., Deo, R.N., Gibson, M., Deacon, A.E., Tran, S.M., Kelly, M. and Wheeler, A. (2023) New records of butterflies and moths (Lepidoptera) from Tobago, West Indies, with two new combinations and one new synonym in Erebidae. *Living World, Journal of the Trinidad and Tobago Field Naturalists' Club* 2023, 99–125. https://ttfnc.org/livingworld/index.php/lwj/article/view/cock_et_al_2023a/article Ⓢ

Cock, M.J.W. and Laguerre, M. (2023) Euchromiina wasp moths (Lepidoptera, Erebidae, Arctiinae, Arctiini) of Trinidad and Tobago. *Living World, Journal of the Trinidad and Tobago Field Naturalists' Club* 2023, 1–83, Appendix 1–58. https://ttfnc.org/livingworld/index.php/lwj/article/view/cock_laguerre2023 Ⓢ

Cock, M.J.W., Laguerre, M., **Buddie, A.G.**, **Cafa, G.**, Alston-Smith, S., Morrall, J. and Gosula, V.S. (2023) Using DNA barcodes to test the association of sexes and morphs in *Calodesma* spp. (Lepidoptera, Erebidae, Arctiinae, Arctiini, Pericopina) of Trinidad, West Indies, with an overview of the genus, taxonomic changes and a new species. *Zootaxa* 5270(2), 231–261. <https://doi.org/10.11646/zootaxa.5270.2.4> Ⓢ

Colmenarez, Y.C., **Smith, D.**, Cabrera Walsh, G., Frances, A., **Corniani, N.** and Vásquez, C. (2023) Regulatory frameworks for the access and use of genetic resources in Latin America. *Neotropical Entomology* 52(2), 333–344. <https://doi.org/10.1007/s13744-022-01017-x> Ⓢ

Compaoré, I., Sanou, M.R., Badolo, A., **Agboyi, L.K.** and **Sanon, A.** (2023) Analysis of fall armyworm infestations on rainy season crops under different cropping systems in two agroecological zones in Burkina Faso, West Africa. *Journal of Plant Diseases and Protection* 130, 1207–1216. <https://doi.org/10.1007/s41348-023-00800-1>

Constantine, K.L., **Makale, F.**, **Mugambi, I.**, **Chacha, D.**, **Rware, H.**, Muvea, A., Kipngetich, V.K., **Tambo, J.**, **Ogunmodede, A.**, **Djeddour, D.**, **Pratt, C.F.**, **Rwomushana, I.** and **Williams, F.** (2023) Assessment of the socio-economic impacts associated with the arrival of apple snail (*Pomacea canaliculata*) in Mwea irrigation scheme, Kenya. *Pest Management Science* 79(11), 4343–4356. <https://doi.org/10.1002/ps.7638> IF>2 Ⓢ

Constantine, K., **Makale, F.**, **Mugambi, I.**, **Rware, H.**, **Chacha, D.**, **Lowry, A.**, **Rwomushana, I.** and **Williams, F.** (2023) Smallholder farmers' knowledge, attitudes and practices towards biological control of papaya mealybug in Kenya. *CABI Agriculture and Bioscience* 4, 18, 15 pp. <https://doi.org/10.1186/s43170-023-00161-7> IF>2 Ⓢ

Dassou, A.G., Loko, Y.L.E., Toffa, J., Gbèmavo, C., Adjahossou, N., Tchakpa, C., **Agboyi, L.K.**, Sanon, A., Dansi, A. and Brévault, T. (2023) Within-field crop diversity and landscape complexity decrease the abundance of fall armyworm larvae in maize cropping systems. *Biological Control* 183, 105260, 8 pp. <https://doi.org/10.1016/j.biocontrol.2023.105260> IF>2

Dawson, W., Peyton, J.M., Pescott, O.L., Adriaens, T., Cottier-Cook, E.J., Frohlich, D.S., Key, G., Malumphy, C., Martinou, A.F., Minchin, D., Moore, N., Rabitsch, W., Rorke, S.L., Tricarico, E., Turvey, K.M.A., Winfield, I.J., Barnes, D.K.A., Baum, D., Bensusan, K., Burton, F.J., Carr, P., Convey, P., Copeland, A.I., Fa, D.A., Fowler, L., Garcia-Berthou, E., Gonzalez, A., **González-Moreno, P.**, Gray, A., Griffiths, R.W., Guillem, R., Guzman, A.N., Haakonsson, J., Hughes, K.A., James, R., Linares, L., **Maczey, N.**, Mailer, S., Naqqi Manco, B., Martin, S., Monaco, A., Moverley, D.G., Rose-Smyth, C., Shanklin, J., Stevens, N., Stewart, A.J., Vaux, A.G.C., Warr, S.J., Werenkraut, V. and Roy, H.E. (2023) Horizon scanning for potential invasive non-native species across the United Kingdom Overseas Territories. *Conservation Letters* 16(1), e12928, 12 pp. <https://doi.org/10.1111/conl.12928> IF>2 ⚡

Durocher-Granger, L., Fiorito, S., Mudenda, S.K., Chiboola, M.M., **Kansiime, M.K.**, Ludwig, D. and Leeuwis, C. (2023) Investigating the feasibility of developing a collective action for biological control of fall armyworm among smallholder farmers in rural communities of Zambia. *CABI Agriculture and Bioscience* 4, 14, 15 pp. <https://doi.org/10.1186/s43170-023-00154-6> IF>2 ⚡

Eleftheriadou, N., Lubanga, U.K., Lefoe, G.K., **Seehausen, M.L.**, **Kenis, M.**, Kavallieratos, N.G. and Avtzis, D.N. (2023) Uncovering the male presence in parthenogenetic *Marchalina hellenica* (Hemiptera: Marchalinidae): insights into its mtDNA divergence and reproduction strategy. *Insects* 14(3), 256, 12 pp. <https://doi.org/10.3390/insects14030256> IF>2 ⚡

Eschen, R., Bekele, K., Jumanne, Y., Kibet, S., **Makale, F.**, Mbwambo, J.R., Megersa, B., Mijay, M., Moyo, F., Munishi, L., **Mwihomeke, M.**, **Nunda, W.**, Nyangito, M., **Witt, A.** and **Schaffner, U.** (2023) Experimental prosopis management practices and grassland restoration in three Eastern African countries. *CABI Agriculture and Bioscience* 4, 21, 17 pp. <https://doi.org/10.1186/s43170-023-00163-5> IF>2 ⚡

Eschen, R., **Kadzamira, M.**, **Stutz, S.**, **Ogunmodede, A.**, **Djedjour, D.**, **Shaw, R.**, **Pratt, C.**, **Varia, S.**, **Constantine, K.** and **Williams, F.** (2023) An updated assessment of the direct costs of invasive non-native species to the United Kingdom. *Biological Invasions* 25(10), 3265–3276. <https://doi.org/10.1007/s10530-023-03107-2> IF>2 ⚡

Essilfie, G.L., Lamptey, S., Baddoo, R.N.N., Amenorpe, G., **Hevi, W.**, Owusu, M. and Atupra, F. (2023) Food safety in the horticultural sector in Ghana: challenges, risk factors and interventions. *Frontiers in Sustainable Food Systems* 7, 1173677, 8 pp. <https://www.frontiersin.org/articles/10.3389/fsufs.2023.1173677> IF>2 ⚡

Fabiyi, O.A., Bello, T.T., Liébanas, G., Clavero-Camacho, I., Cantalapiedra-Navarrete, C., Archidona-Yuste, A., Palomares-Rius, J.E., **Hunt, D.J.** and Castillo, P. (2023) Anatomical and molecular characterization of some rhigonematid parasites of millipedes in Nigeria, with new insights into their phylogeny. *Journal of Helminthology* 97, e47, 17 pp. <https://doi.org/10.1017/S0022149X23000275> ⚡

Fazlullah, Shahid, H., **Muzammil, F.**, **Aslam, M.N.** and **Zada, N.** (2023) Insecticidal potential of eco-friendly mycoinsecticides for the management of fall armyworm (*Spodoptera frugiperda*) under *in vitro* condition. *Bulgarian Journal of Agricultural Science* 29(1), 124–130. <https://www.agrojournal.org/29/01-15.pdf> ⚡

Franić, I., Allan, E., Prospero, S. and 80 co-authors including **Kenis, M.**, **Li, H.** and **Eschen, R.** (2023) Climate, host and geography shape insect and fungal communities of trees. *Scientific Reports* 13, 11570, 13 pp. <https://doi.org/10.1038/s41598-023-36795-w> IF>2 ⚡

Fu, Y., Liu, X., Wang, Q., Liu, H., Cheng, Y., **Li, H.**, Zhang, Y. and Chen, J. (2023) Two salivary proteins Sm10 and SmC002 from grain aphid *Sitobion miscanthi* modulate wheat defense and enhance aphid performance. *Frontiers in Plant Science* 14, 1104275, 13 pp. <https://doi.org/10.3389/fpls.2023.1104275> IF>2 ⚡

Gaskin, J.F., **Cortat, G.** and West, N.M. (2023) Vegetative versus sexual reproduction varies widely in *Convolvulus arvensis* across western North America. *Biological Invasions* 25(7), 2219–2229. <https://doi.org/10.1007/s10530-023-03035-1> IF>2

Gosik, R., Sprick, P., Wrzesień, M., Dzyr, A., Krstić, O. and **Toševski, I.** (2023) Developmental biology and identification of a garden pest, *Otiorhynchus (Podoropelmus) smreczynskii* Cmoluch, 1968 (Coleoptera, Curculionidae, Entiminae), with comments on its origin and distribution. *Insects* 14(4), 360, 28 pp. <https://doi.org/10.3390/insects14040360> IF>2 ⚡

Green, S., Dehnen-Schmutz, K., Drakulic, J., **Eschen, R.**, Orazio, C., Douma, J.C., Lundén, K., Colombari, F. and Jactel, H. (2023) Awareness, detection and management of new and emerging tree pests and pathogens in Europe: stakeholders' perspectives. *NeoBiota* 84, 9–40. <https://doi.org/10.3897/neobiota.84.95761> IF>2 ⓘ

Gurmessa, N.E. and **Bundi, M.** (2023) Use of plant clinic advice among farmers in Ethiopia: implications for sustainable pest management service. *International Journal of Pest Management* 69(2), 193–205. <https://doi.org/10.1080/09670874.2020.1869348> ⓘ

Haider, M.W., Nafees, M., Iqbal, R., **Asad, H.U.**, Azeem, F., Ali, B., Shaheen, G., Iqbal, J., Vyas, S., Arslan, M., ur Rahman, M.H., Elshikh, M.S. and Ajmal, M.A. (2023) Postharvest starch and sugars adjustment in potato tubers of wide-ranging dormancy genotypes subjected to various sprout forcing techniques. *Scientific Reports* 13, 14845, 22 pp. <https://doi.org/10.1038/s41598-023-37711-y> IF>2 ⓘ

Hill, R., Levicky, Q., Pitsillides, F., Junnonen, A., Arrigoni, E., **Bonnin, J.M.**, **Kermode, A.**, Mian, S., Leitch, I.J., **Buddie, A.G.**, Buggs, R.J.A. and Gaya, E. (2023) Tapping culture collections for fungal endophytes: first genome assemblies for three genera and five species in the Ascomycota. *Genome Biology and Evolution* 15(3), evad038, 8 pp. <https://doi.org/10.1093/gbe/evad038> IF>2 ⓘ

Hussain, I., Ijaz, M., Ul-Allah, S., Sattar, A., Sher, A., **Nawaz, A.**, Gaffar, A., ur Rahmann, M.H., Ahmad, S., Rasheed, I., Nasif, O. and Ansari, M.J. (2023) Optimum zinc fertilization and sowing date improved growth, yield components, and grain Zn contents of bread wheat under different tillage systems. *Journal of Soil Science and Plant Nutrition* 23(2), 2344–2353. <https://doi.org/10.1007/s42729-023-01185-8> IF>2

Hussain, S., Tayyab, M., Anwar, T., **Nazir, T.**, Majeed, M.Z., **Asad, Z.**, Adnan, M. and Alam, T. (2023) Evaluation of some selected local phytoextracts against wheat aphid *Schizaphis graminum rondani* (Hemiptera: Aphididae) under laboratory and field conditions. *Sarhad Journal of Agriculture* 39(1), 242–250. <https://dx.doi.org/10.17582/journal.sja/2023/39.1.242.250> ⓘ

Hyde, K.D., Abdel-Wahab, M.A., Abdollahzadeh, J., Abeywickrama, P.D., Absalan, S., Afshari, N., Ainsworth, A.M. et al. including **Evans, H.C.** (2023) Global consortium for the classification of fungi and fungus-like taxa. *Mycosphere* 14(1), 1960–2012. <https://doi.org/10.5943/mycosphere/14/1/23> IF>2 ⓘ

Ijaz, M., Ul-Allah, S., Sattar, A., Sher, A., Hussain, I. and **Nawaz, A.** (2023) Evaluation of various organic amendment sources to improve the root yield and sugar contents of sugar beet genotypes (*Beta vulgaris* L.) under arid environments. *Sustainability* 15(5), 3898, 19 pp. <https://doi.org/10.3390/su15053898> IF>2 ⓘ

Jabeur, R., Guyon, V., **Toth, S.**, Pereira, A.E., Huynh, M.P., Selmani, Z., Boland, E., Bosio, M., Beuf, L., Clark, P., Vallenet, D., Achouak, W., Audiffrin, C., Torney, F., Paul, W., Heulin, T., Hibbard, B.E., **Toepfer, S.** and Sallaud, C. (2023) A novel binary pesticidal protein from *Chryseobacterium arthrosphaerae* controls western corn rootworm by a different mode of action to existing commercial pesticidal proteins. *PLoS ONE* 18(2), e0267220, 23 pp. <https://doi.org/10.1371/journal.pone.0267220> IF>2 ⓘ

Jactel, H., Battisti, A., Branco, M., Douma, J.C., **Kenis, M.**, Orazio, C., Robinet, C., Santini, A., Sapundzhieva, A., **Seehausen, M.L.** and Stoev, P. (2023) Management options for non-native forest pests along their invasion pathways [Editorial]. *NeoBiota* 84, 1–7. <https://doi.org/10.3897/neobiota.84.104682> IF>2 ⓘ

Jeger, M.J., **Fielder, H.**, **Beale, T.**, **Szyniszewska, A.**, Parnell, S. and Cunniffe, N.J. (2023) What can be learnt by a synoptic review of plant disease epidemics and outbreaks published in 2021? *Phytopathology* 113(7), 1141–1158. <https://doi.org/10.1094/PHYTO-02-23-0069-IA> IF>2 ⓘ

Jones, I.M., **Kurose, D.**, **Shaw, R.H.**, Smith, S.M. and Bourchier, R. (2023) Leaf-roll gall formation in *Reynoutria × bohemica* and its implications for biological control with *Aphalara itadori*. *Entomologia Experimentalis et Applicata* 171(12), 922–933. <https://doi.org/10.1111/eea.13368> ⓘ

Jones, I.M., **Seehausen, M.L.**, Smith, S.M. and Bourchier, R.S. (2023) The effects of warm and cold periods on resource depletion and emergence synchrony in diapausing *Hypena opulenta*: implications for biological control of invasive swallow-worts in North America. *Entomologia Experimentalis et Applicata* 171(12), 990–997. <https://doi.org/10.1111/eea.13362> ⓘ

Jović, J. and Toševski, I. (2023) Multiplex PCR for discriminating host plant associations of *Hyalesthes obsoletus* (Hemiptera: Cixiidae), a key vector and driver of 'Ca. Phytoplasma solani' epidemiology. *Agronomy* 13, 831, 18 pp. <https://doi.org/10.3390/agronomy13030831> IF>2 ⚡

Ju, F., Pang, J., Sun, L., Gu, J., Wang, Z., Wu, X., **Ali, S.**, Wang, Y., Zhao, W., Wang, S., Zhou, Z. and **Chen, B.** (2023) Integrative transcriptomic, metabolomic and physiological analyses revealed the physiological and molecular mechanisms by which potassium regulates the salt tolerance of cotton (*Gossypium hirsutum* L.) roots. *Industrial Crops and Products* 193, 116177, 17 pp. <https://doi.org/10.1016/j.indcrop.2022.116177> IF>2

Justesen, M.J., Seehausen, M.L., Havill, N.P., Kenis, M., Gaimari, S.D., Matchutadze, I., Zembrzuski, D. and Ravn, H.P. (2023) Evaluation of *Leucopis hennigrata* (Diptera: Chamaemyiidae) as a classical biological control agent of *Adelges nordmannianae* (Hemiptera: Adelgidae) in northern Europe. *Biological Control* 183, 105264, 18 pp. <https://www.sciencedirect.com/science/article/abs/pii/S1049964423001172> IF>2

Kadzamira, M.A.T.J., Ogunmodede, A., Duah, S., Romney, D., Clottey, V.A. and Williams, F. (2023) African agri-entrepreneurship in the face of the COVID-19 pandemic. *CABI Agriculture and Bioscience* 4, 16, 9 pp. <https://doi.org/10.1186/s43170-023-00157-3> IF>2 ⚡

Kansiime, M.K., Rwomushana, I. and Mugambi, I. (2023) Fall armyworm invasion in Sub-Saharan Africa and impacts on community sustainability in the wake of Coronavirus Disease 2019: reviewing the evidence. *Current Opinion in Environmental Sustainability* 62, 101279, 6 pp. <https://doi.org/10.1016/j.cosust.2023.101279> IF>2 ⚡

Kansiime, M.K., Rwomushana, I., Mugambi, I., Makale, F., Lamontagne-Godwin, J., Chacha, D., Kibwage, P., Oluyali, J. and Day, R. (2023) Crop losses and economic impact associated with papaya mealybug (*Paracoccus marginatus*) infestation in Kenya. *International Journal of Pest Management* 69(2), 150–163. <https://doi.org/10.1080/09670874.2020.1861363> ⚡

Kapeua-Ndacnou, M., de Abreu, L.M., de Macedo, D.M., da Nóbrega, T.F., Pereira, C.M., **Evans, H.C.** and **Barreto, R.W.** (2023) Assessing the biocontrol potential of *Clonostachys* species isolated as endophytes from *Coffea* species and as mycoparasites of *Hemileia* rusts of coffee in Africa. *Journal of Fungi* 9(2), 248, 24 pp. <https://doi.org/10.3390/jof9020248> IF>2 ⚡

Kapeua-Ndacnou, M., Nóbrega, T.F., Batista, L.R., **Evans, H.C.**, Abreu, L.M., Begoudé, D.A.B., Reis, T.A. and **Barreto, R.W.** (2023) Aspergillus *flavus* from coffee in Cameroon: a non-aflatoxigenic endophytic isolate antagonistic to coffee leaf rust (*Hemileia vastatrix*). *Journal of Applied Microbiology* 134(5), lxad076, 13 pp. <https://doi.org/10.1093/jambo/lxad076> IF>2

Kenis, M. (2023) Prospects for classical biological control of *Spodoptera frugiperda* (Lepidoptera: Noctuidae) in invaded areas using parasitoids from the Americas. *Journal of Economic Entomology* 116(2), 331–341. <https://doi.org/10.1093/je/toad029> IF>2 ⚡

Kenis, M., Benelli, G., Biondi, A., Calatayud, P.-A., Day, R., Desneux, N., Harrison, R.D., Kriticos, D., Rwomushana, I., van den Berg, J., Verheggen, F., Zhang, Y.-J., Agboyi, L.K., Ahissou, R.B., Ba, M.N., Bernal, J., Bueno, A.F., Carrière, Y., Carvalho, G.A., Chen, X.-X., Cicero, L., du Plessis, H., Early, R., Fallet, P., Fiaboe, K.K.M., Firake, D.M., Goergen, G., Groot, A.T., Guedes, R.N.C., Gupta, A., Hu, G., Huang, F.N., Jaber, L.R., Malo, E.A., McCarthy, C.B., Meagher, R.L. Jr, Mohamed, S., Sanchez, D.M., Nagoshi, R.N., Nègre, N., Niassy, S., Ota, N., Nyamukondiwa, C., Omoto, C., Palli, S.R., Pavela, R., Ramirez-Romero, R., Rojas, J.C., Subramanian, S., Tabashnik, B.E., Tay, W.T., Virla, E.G., Wang, S., Williams, T., Zang, L.-S., Zhang, L. and Wu, K. (2023) Invasiveness, biology, ecology, and management of the fall armyworm, *Spodoptera frugiperda*. *Entomologia Generalis* 43(2), 187–241. <https://doi.org/10.1127/entomologia/2022/1659> IF>2 ⚡

Klötzli, J., Suter, M., Lüscher, A., Müller-Schärer, H. and **Schaffner, U.** (2023) Competitive interactions affect larval survival of two root-boring weed biological control candidates of *Rumex* spp. *BioControl* 68(2), 207–220. <https://doi.org/10.1007/s10526-022-10157-3> IF>2 ⚡

Klötzli, J., **Suter, M.**, **Schaffner, U.**, Müller-Schärer, H. and Lüscher, A. (2023) Synergistic effects of grass competition and insect herbivory on the weed *Rumex obtusifolius* in an inundative biocontrol approach. *Scientific Reports* 13, 18508, pp. <https://doi.org/10.1038/s41598-023-45609-y> IF>2 ⚡

Lesieur, V., Sforza, R.F.H., Sheppard, A.W. and **Shaw, R.H.** (2023) Prioritising environmental invasive weeds of European concern for classical biological control: a reanalysis. *Weed Research* 63(4), 218–231. <https://doi.org/10.1111/wre.12582> ⓘ

Li, H., Kadzamira, M.A.T.J., Ogunmodede, A., Finch, E., Zhu, J., **Romney, D.** and **Luke, B.** (2023) Lessons learned and challenges of biopesticide usage for locust management – the case of China. *Sustainability* 15(7), 6193, 10 pp. <https://doi.org/10.3390/su15076193> IF>2 ⓘ

Li, H., **Wang, M.**, Li, T., Yin, K., Gu, H. and **Zhang, F.** (2023) 警惕南方黏虫传入我国 [Precaution of southern armyworm, *Spodoptera eridania* (Stoll), potential invasive pest in China]. *环境昆虫学报 [Journal of Environmental Entomology]* 45(2), 397–402. DOI: 10.3969/j.issn.1674–0858.2023.02.11 [In Chinese with English abstract, free access to students and scientists in China]. ⓘ

Li, H., Zhu, J., Cheng, Y., Zhuso, F., Liu, Y., Huang, J., **Taylor, B.**, **Luke, B.**, **Wang, M.** and **González-Moreno, P.** (2023) Daily activity patterns and body temperature of the Oriental migratory locust, *Locusta migratoria manilensis* (Meyen), in natural habitat. *Frontiers in Physiology* 14, 1110998, 10 pp. <https://doi.org/10.3389/fphys.2023.1110998> IF>2 ⓘ

Li, W.-J., **Chen, J.-H.**, Avila, G.A., **Ali, M.-Y.**, **Tian, X.-Y.**, **Luo, Z.-Y.**, **Zhang, F.**, Shi, S.-S. and **Zhang, J.-P.** (2023) Performance of two egg parasitoids of brown marmorated stink bug before and after cold storage. *Frontiers in Physiology* 14, 1102216, 9 pp. <https://doi.org/10.3389/fphys.2023.1102216> IF>2 ⓘ

Lopes, R.B., Vargas, G., **Colmenárez, Y.C.** and Faria, M. (2023) Biological control in Latin America [Editorial]. *Neotropical Entomology* 52(2), 119–121. <https://doi.org/10.1007/s13744-023-01036-2> ⓘ

Luke, B., Acheampong, M.A., Rangel, D.E.N., Cornelius, E.W., Asante, S.K., Nboyine, J.A., Eziah, V.Y., Fening, K.O., Storm, C., Jessop, N., **Clottey, V.A.**, Potin, O., Tyson, C., Moore, D. and Mikaelyan, A. (2023) The use of *Beauveria bassiana* for the control of the larger grain borer, *Prostephanus truncatus*, in stored maize: semi-field trials in Ghana. *Fungal Biology* 127(12), 1505–1511. <https://doi.org/10.1016/j.funbio.2023.08.004> IF>2

Luo, S., Png, G.K., Ostle, N.J., Zhou, H., Hou, X., Luo, C., Quinton, J.N., **Schaffner, U.**, Sweeney, C., Wang, D., Wu, J., Wu, Y. and Bardgett, R.D. (2023) Grassland degradation-induced declines in soil fungal complexity reduce fungal community stability and ecosystem multifunctionality. *Soil Biology and Biochemistry* 176, 108865, 12 pp. <https://doi.org/10.1016/j.soilbio.2022.108865> IF>2 ⓘ

Luqman, T., Qamar, Z.-ul., Tabasum, A., El-Kallawy, W.H., **Nazir, T.**, Attacha, S., Fiaz, S., Nadeem, M.A., Hameed, A., Maryum, Z., Kimiko, I. and Attia, K. (2023) Genetic characterization of coarse and basmati rice (*Oryza sativa* L.) through microsatellite markers and morpho-agronomic traits. *Genetic Resources and Crop Evolution* 70(8), 2307–2320. <https://doi.org/10.1007/s10722-023-01620-w>

Machado, R.A.R., Bhat, A.H., **Fallet, P.**, Turlings, T.C.J., Kajuga, J., Yan, X. and **Toepfer, S.** (2023) *Xenorhabdus bovinii* subsp. *africana* subsp. nov., isolated from *Steinernema africanum* entomopathogenic nematodes. *International Journal of Systematic and Evolutionary Microbiology* 73(4), 9 pp. <https://doi.org/10.1099/ijsem.0.005795> IF>2

Malila, B.P., Kaaya, O.E., Lusambo, L.P., **Schaffner, U.** and Kilawe, C.J. (2023) Factors influencing smallholder farmer's willingness to adopt sustainable land management practices to control invasive plants in northern Tanzania. *Environmental and Sustainability Indicators* 19, 100284, 8 pp. <https://doi.org/10.1016/j.indic.2023.100284> IF>2 ⓘ

Marchante, H., Marchante, E., Verbrugge, L., Lommen, S. and **Shaw, R.** (2023) Knowledge and perceptions of invasive plant biocontrol in Europe versus the rest of the world. *Journal of Environmental Management* 327, 116896, 12 pp. <https://doi.org/10.1016/j.jenvman.2022.116896> IF>2 ⓘ

Mason, P.G., Barratt, B.I.P., McKay, F., Klapwijk, J., Silvestri, L.C., Hill, M., **Hinz, H.L.**, Sheppard, A., Brodeur, J., Vitorino, M.D., **Weyl, P.** and Hoelmer, K.A. (2023) Impact of access and benefit sharing implementation on biological control genetic resources. *BioControl* 68(3), 235–251. <https://doi.org/10.1007/s10526-023-10176-8> IF>2 ⓘ

Mason, P.G., Hill, M., **Smith, D.**, Silvestri, L.C., **Weyl, P.**, Brodeur, J. and Vitorino, M.D. (2023) Best practices in the use and exchange of microorganism biological control genetic resources. *BioControl* 68(3), 311–327. <https://doi.org/10.1007/s10526-023-10197-3> IF>2 ⓘ

Mason, P.G., McKay, F., Silvestri, L.C., Hill, M., **Weyl, P., Hinz, H.L.**, Brodeur, J., Vitorino, M.D. and Barratt, B.I.P. (2023) International agreement for the use and exchange of classical biological control genetic resources: a practical proposal. *BioControl* 68(3), 329–339. <https://doi.org/10.1007/s10526-023-10177-7> IF>2 

Matova, P.M., Kamutando, C.N., Warburton, M.L., Williams, W.P., Magorokosho, C., Shimelis, H., Labuschagne, M., **Day, R.** and Gowda, M. (2023) New techniques for breeding maize (*Zea mays*) varieties with fall armyworm resistance and market-preferred traits for sub-Saharan Africa. *Plant Breeding* 142(1), 1–11. <https://doi.org/10.1111/pbr.13063> IF>2 

McClay, A., Bourchier, R., Landry, J., Morris, C. and **Toševski, I.** (2023) Citizen science reveals the establishment of *Chamaesphecia empiformis* (Esper) (Lepidoptera: Sesiidae), a long-lost biological control agent for *Euphorbia cyparissias* (Euphorbiaceae), in Ontario, Canada. *The Canadian Entomologist* 155, e29, 7 pp. <https://doi.org/10.4039/tce.2023.17>

Migliorini, D., Auger-Rozenberg, M.-A., Battisti, A., Brockhoff, E., **Eschen, R.**, Fan, J.-T., Jactel, H., Orazio, C., Paap, T., Prospero, S., Ren, L., **Kenis, M.**, Roques, A. and Santini, A. (2023) Towards a global sentinel plants research strategy to prevent new introductions of non-native pests and pathogens in forests. The experience of HOMED. *Research Ideas and Outcomes* 9, e96744, 14 pp. <https://doi.org/10.3897/rio.9.e96744> 

Mohamad, S.A., Mohd Masri, M.M., Kamarudin, N., Sulaiman, M.R., **Costa, A.**, Ong-Abdullah, M., Othman, H., Ahmad, S.N., Nurul, Y.S.M., Zam Abdul Karim, Idris Abdul Ghani, Amit, S., Zakaria, A., Su Chong Ming, Siaw Ting Chuan, Jalinas, J., Yap Yau Koong, Ahmad Anuar Sairi, Syed Mohd Faizal Syed Ali, Abdullah, M., **Annamalai, S.**, King Jie Hung, Muhamad Azmi Mohammed, Idris Abu Seman, Moslim, R. and Ahmad Parvez Ghulam Kadir (2023) Impact of *Elaeidobius kamerunicus* (Faust) introduction on oil palm fruit formation in Malaysia and factors affecting its pollination efficiency: a review. *Journal of Oil Palm Research* 35(1), 1–22. <https://doi.org/10.21894/jopr.2022.0021> 

Mweke, A., **Rwomushana, I.**, **Okello, A.**, **Chacha, D.**, Guo, J. and **Luke, B.** (2023) Management of *Spodoptera frugiperda* J.E. Smith using recycled virus inoculum from larvae treated with baculovirus under field conditions. *Insects* 14(8), 686, 10 pp. <https://doi.org/10.3390/insects14080686> IF>2 

Myint, Y.Y., Huang, X., Bai, S., Zhang, T., **Babendreier, D.**, He, K. and Wang, Z. (2023) Field evaluation of *Trichogramma* strains collected from Myanmar for biological control of Asian corn borer, *Ostrinia furnacalis* (Guenée) (Lepidoptera: Crambidae) and sustainable maize production. *Crop Protection* 171, 106284, 12 pp. <https://doi.org/10.1016/j.cropro.2023.106284> IF>2

Ochieng', V., **Rwomushana, I.**, Ong'amo, G., Ndegwa, P., Kamau, S., **Makale, F.**, **Chacha, D.**, Gadhia, K. and **Akiri, M.** (2023) Optimum flight height for the control of desert locusts using unmanned aerial vehicles (UAV). *Drones* 7(4), 233, 12 pp. <https://doi.org/10.3390/drones7040233> IF>2 

Radonjić, S., Krstić, O., Cvrković, T., Hrnčić, S., Marinković, S., Mitrović, M., **Toševski, I.** and Jović, J. (2023) The first report on the occurrence of Flavescence dorée phytoplasma affecting grapevine in vineyards of Montenegro and an overview of epidemic genotypes in natural plant reservoirs. *Journal of Plant Pathology* 105(2), 419–427. <https://doi.org/10.1007/s42161-023-01318-z> IF>2

Rane, R., Walsh, T.K., Lenancker, P., Gock, A., Dao, T.H., Van Liem, N., Khin, T.N., Amalin, D., Chittarath, K., **Faheem, M.**, **Annamalai, S.**, **Thanarajoo, S.S.**, Trisyono, A.T., Khay, S., Kim, J., Kuniata, L., Powell, K., Kalyebi, A., Otim, M.H., Nam, K., d'Alençon, E., Gordon, K.H.J. and Tay, W.T. (2023) Complex multiple introductions drive fall armyworm invasions into Asia and Australia. *Scientific Reports* 13, 660, 18 pp. <https://doi.org/10.1038/s41598-023-27501-x> IF>2 

Ryan, M.J., Mauchline, T.H., Malone, J.G., Jones, S., Thompson, C.M.A., **Bonnin, J.M.**, **Stewart, H.**, Yau, P.T.O., Taketani, R.G., Clark, I.M. and Holden, N. (2023) The UK Crop Microbiome Cryobank: a utility and model for supporting Phytobiomes research. *CABI Agriculture and Bioscience* 4, 53, 6 pp. <https://doi.org/10.1186/s43170-023-00190-2> IF>2 

Sankara, F., Sankara, F., Pousga, S., Coulibaly, K., Nacoulma, J.P., Ilboudo, Z., Ouedraogo, I., Wangrawa, W.D., Somda, I. and **Kenis, M.** (2023) Production of *Hermetia illucens* L and *Musca domestica* L larvae (maggots) for animal feed in West Africa: a review. *International Journal of Innovation and Applied Studies* 39(4), 1601–1616. <https://ijias.issr-journals.org/abstract.php?article=IJIAS-23-122-02> 

Sankara, F., Sankara, F., Pousga, S., Coulibaly, K., Nacoulma, J.P., Ilboudo, Z., Ouédraogo, I., Somda, I. and **Kenis, M.** (2023) Optimization of production methods for black soldier fly larvae (*Hermetia illucens* L.) in Burkina Faso. *Insects* 14(9), 776, 13 pp. <https://doi.org/10.3390/insects14090776> IF>2 

Sankara, F., Sankara, F., Pousga, S., Coulibaly, K., Nacoulma, J.P., Sanou, H.F., Ilboudo, Z., Ouedraogo, I., Salou, E., Somda, I. and **Kenis, M.** (2023) Évolution des perceptions des agro-éleveurs sur la production et l'utilisation des asticots dans l'alimentation de la volaille au Burkina Faso. [Evolution of agro-pastoralists' perceptions on maggot production and use in poultry feed]. *Journal of Applied Biosciences* 182, 19069–19087. <https://doi.org/10.35759/JABs.182.8> [In French with English abstract]. 

Saravanakumar, D., Bartholomew, E.S., Seepersad, G., Gore-Francis, J., Goldsmith, J., **Ramnanan, N.**, Chang, P.G., Bridgemohan, P., Sewsaran, R., Medrano-Cabral, S. and Morrison, St.S. (2023) Prioritisation of quarantine pest list for the Caribbean using a multi-criteria decision approach. *NeoBiota* 88, 1–16. <https://doi.org/10.3897/neobiota.88.102673> IF>2 

Sári-Barnácz, F.E., Zalai, M., **Toepfer, S.**, Milics, G., **Iványi, D.**, Tóthné Kun, M., Mészáros, J., Árvai, M. and Kiss, J. (2023) Suitability of satellite imagery for surveillance of maize ear damage by cotton bollworm (*Helicoverpa armigera*) larvae. *Remote Sensing* 15(23), 5602, 39 pp. <https://doi.org/10.3390/rs15235602> IF>2 

Seehausen, M.L., Branco, M., Afonso, C. and **Kenis, M.** (2023) Testing a modified version of the EPPO decision support scheme for release of classical biological control agents of plant pests using *Ganaspis* cf. *brasiliensis* and *Cleruchoides noackae* as case studies. *NeoBiota* 87, 121–141. <https://doi.org/10.3897/neobiota.87.103187> IF>2 

Seier, M.K., Rapini, A., **Pollard, K.M.**, Barreto, R.W. and **Evans, H.C.** (2023) Tracing the origins and tracking the movements of invasive rubber vines (*Cryptostegia* spp., Apocynaceae). *NeoBiota* 89, 95–133. <https://doi.org/10.3897/neobiota.89.109180> IF>2 

Sessitsch, A., Wakelin, S., Schloter, M., Maguin, E., Cernava, T., Champomier-Verges, M.-C., Charles, T.C., Cotter, P.D., Ferrocino, I., Kriaa, A., Lebre, P., Cowan, D., Lange, L., Kiran, S., Markiewicz, L., Meisner, A., Olivares, M., Sarand, I., Schelkle, B., Selvin, J., Smidt, H., van Overbeek, L., Berg, G., Cocolin, L., Sanz, Y., Fernandes, W.L. Jr, Liu, S.J., **Ryan, M.**, Singh, B. and Kostic, T. (2023) Microbiome interconnectedness throughout environments with major consequences for healthy people and a healthy planet. *Microbiology and Molecular Biology Reviews* 87(3), e0021222. <https://doi.org/10.1128/mmbr.00212-22> IF>2

Shiferaw, H., Alamirew, T., Dzikiti, S., Bewket, W., Zeleke, G., Teketay, D. and **Schaffner, U.** (2023) Water abstraction of invasive *Prosopis juliflora* and native *Senegalia senegal* trees: a comparative study in the Great Rift Valley Area, Ethiopia. *Science of The Total Environment* 862, 160833, 9 pp. <https://doi.org/10.1016/j.scitotenv.2022.160833> IF>2 

Slodowicz, D., Durbecq, A., Ladouceur, E., **Eschen, R.**, Humbert, J.-Y. and Arlettaz, R. (2023) The relative effectiveness of different grassland restoration methods: a systematic literature search and meta-analysis. *Ecological Solutions and Evidence* 4(2), e12221, 13 pp. <https://doi.org/10.1002/2688-8319.12221> IF>2 

Su, M., Du, L., **Ali, M.Y.**, Yu, J., Chi, M., Teng, Z., Fan, Y., Tan, X. and Zhou, H. (2023) Differences in morphology, mitochondrial genomes, and reproductive compatibility between two clades of parasitic wasps *Aphelinus mali* (Hymenoptera: Aphelinidae) in China. *PLoS ONE* 18(2), e0279663, 10 pp. <https://doi.org/10.1371/journal.pone.0279663> IF>2 

Subedi, B., Schwarzländer, M., Eigenbrode, S.D., Harmon, B.L. and **Weyl, P.** (2023) Understanding the host finding behavior of a biological weed control candidate specialist as a contribution to pre-release risk assessments. *Entomologia Experimentalis et Applicata* 171(12), 943–953. <https://doi.org/10.1111/eea.13334> 

Suter, M., Klötzli, J., Beaumont, D., Kolmanič, A., Leskovšek, R., **Schaffner, U.**, Storkey, J. and Lüscher, A. (2023) Can the soil seed bank of *Rumex obtusifolius* in productive grasslands be explained by management and soil properties? *PLoS ONE* 18(6), e0286760, 15 pp. <https://doi.org/10.1371/journal.pone.0286760> IF>2 

Swarna, I.J., Sheheli, S., **Finch, E.A.** and **Khan, M.A.M.** (2023) Invasion of Rugose spiraling whitefly (Hemiptera: Aleyrodidae) across Bangladesh coastal region causes widespread damage to coconut plants. *Journal of Economic Entomology* 116(3), 864–871. <https://doi.org/10.1093/jee/toad049> IF>2

Tambo, J.A., Kansiime, M.K., Mugambi, I., Agboyi, L.K., Beseh, P.K. and **Day, R.** (2023) Economic impacts and management of fall armyworm (*Spodoptera frugiperda*) in smallholder agriculture: a panel data analysis for Ghana. *CABI Agriculture and Bioscience* 4, 38, 14 pp. <https://doi.org/10.1186/s43170-023-00181-3> IF>2 ⚡

Tambo, J.A., Mbugua, F., Duah, S.A., Oppong-Mensah, B., Ocloo, C.Y. and **Williams, F.** (2023) Pest risk information, agricultural outcomes and food security: evidence from Ghana. *Food Security* 15(6), 1667–1683. <https://doi.org/10.1007/s12571-023-01398-w> IF>2 ⚡

Tambo, J.A., Mugambi, I., Onyango, D.O., Uzayisenga, B. and **Romney, D.** (2023) Using mass media campaigns to change pesticide use behaviour among smallholder farmers in East Africa. *Journal of Rural Studies* 99, 79–91. <https://doi.org/10.1016/j.jrurstud.2023.03.001> IF>2 ⚡

Tambo, J.A., Uzayisenga, B., **Mugambi, I., Onyango, D.O.** and **Romney, D.** (2023) Sustainable management of fall armyworm in smallholder farming: the role of a multi-channel information campaign in Rwanda. *Food and Energy Security* 12(2), e414, 14 pp. <https://doi.org/10.1002/fes3.414> IF>2 ⚡

Terefe, B., Danish, M., Faisal, S., Holmes, K.A., Luke, B. and **Williams, F.** (2023) Gender analysis of uptake of *Trichogramma chilonis* to control *Helicoverpa armigera* on tomato crops in Pakistan. *Sustainability* 15(3), 2214, 19 pp. <https://doi.org/10.3390/su15032214> IF>2 ⚡

Tipper, N.P., Harms, N.E., Purcell, M.F., Hong, S.H., **Häfliger, P.**, Kilroy, K., Wolfe, A.L. and Thum, R.A. (2023) Assessing the genetic diversity of *Nymphoides peltata* in the native and adventive range using microsatellite markers. *Biological Invasions* 25(12), 3949–3963. <https://doi.org/10.1007/s10530-023-03151-y> IF>2

Toepfer, S., Niyongere, C., Ndayihanzamaso, P., Ndikumana, D., Irakoze, W., Cimpaye, E., Minani, D., Bindariye, P. and **Ochilo, W.** (2023) Sustainable improvements in diagnostic capabilities of plant health practitioners through short in-service training. *Sustainability* 15(17), 12956, 12 pp. <https://doi.org/10.3390/su151712956> IF>2 ⚡

Toševski, I., Sing, S.E., Caldara, R., Weaver, D.K., Jović, J., Krstić, O. and **Hinz, H.L.** (2023) Retrospective use of integrative taxonomy in classical biological control: the unintentional introduction of the weevil *Rhinusa dieckmanni* to North America. *Biological Control* 183, 105270, 11 pp. <https://doi.org/10.1016/j.biocontrol.2023.105270> IF>2 ⚡

Tung, S.A., Huang, Y., Hafeez, A., **Ali, S.**, Song, X. and **Yang, G.** (2023) Reduced cotton growth and yield under foliar application of mepiquat chloride was not due to less nitrogen and phosphorus acquisition under an innovative cropping model in Yangtze River Valley of China. *Journal of Soil Science and Plant Nutrition* 23(4), 5740–5758. <https://doi.org/10.1007/s42729-023-01437-7> IF>2

Ullah, M.S., Sharmin, D., Tumpa, T.A., Rashed, M.T.N.N., Mondal, P., Akram, M.W., Chowdhury, S., Ahmad, M., Gotoh, T. and **Chaudhary, M.** (2023) Invasion, distribution, monitoring and farmers perception of fall armyworm (*Spodoptera frugiperda*) and farm-level management practices in Bangladesh. *Insects* 14(4), 343, 16 pp. <https://doi.org/10.3390/insects14040343> IF>2 ⚡

Umar, A., Bhatti, H.S. and **Honey, S.F.** (2023) A call for aflatoxin control in Asia. *CABI Agriculture and Bioscience* 4, 27, 17 pp. <https://doi.org/10.1186/s43170-023-00169-z> IF>2 ⚡

Valdez, E.M., Joshi, R.C., Rillon, G.S., Donayre, D.K.M., Martin, E.C., dela Cruz, K.B., Sandoval, F.R., Quilang, E.J.P., Aquino, M.F., Mariano, J. Jr, Pascual, M.K., **Faheem, M.** and **Annamalai, S.** (2023) Rice: a new host of fall armyworm *Spodoptera frugiperda* (J.E. Smith) and its strains in the Philippines. *Insect Environment* 26(2), 129–136. <https://doi.org/10.55278/QLVU7706> ⚡

Valdez, E.M., Rillon, G.S., **Joshi, R.C.**, dela Cruz, K.B., Donayre, D.K.M., Martin, E.C., Sandoval, F.R., Quilang, E.J.P., Aquino, M.F., Pascual, M.K., Mariano, J. Jr, Evergilio Aquino, E., **Faheem, M.** and **Annamalai, S.** (2023) Fall armyworm, *Spodoptera frugiperda* (J.E. Smith) damage on rice in the Philippines. *Asia Pacific Journal of Sustainable Agriculture, Food and Energy* 11(2), 37–46. <https://doi.org/10.36782/apjsafe.v1i2.233> ⚡

Vásquez, C., **Colmenárez, Y.C.**, Greco, N. and Ramos, M. (2023) Current status of phytoseiid mites as biological control agents in Latin America and experiences from Argentina using *Neoseiulus californicus*. *Neotropical Entomology* 52(2), 240–250. <https://doi.org/10.1007/s13744-023-01026-4> [Correction: *Neotropical Entomology* (2024) 1 p. <https://doi.org/10.1007/s13744-024-01157-2>. 

Wang, B.-X., Zhu, L., Ma, G., Najar-Rodriguez, A., **Zhang, J.-P.**, **Zhang, F.**, Avila, G.A. and Ma, C.-S. (2023) Current and potential future global distribution of the raisin moth *Cadra figulilella* (Lepidoptera: Pyralidae) under two different climate change scenarios. *Biology* 12, 435, 24 pp. <https://doi.org/10.3390/biology12030435> [Correction: *Biology* 12, 1045 (2023) 4 pp. <https://doi.org/10.3390/biology12081045>]. IF>2 

Wang, J., Wang, M., Li, H., Zhuo, F., Shu, J. and Zhang, G. (2023) 基于5个数据库的黄脊竹蝗研究进展可视化分析[Visualization analysis of research progress of Ceracris kiangsu based on five literature databases]. *Anhui Agricultural Science Bulletin* 9, 140–145. DOI: 10.16377/j.cnki.issn1007-7731.2023.09.021 [In Chinese with English abstract, free access to students and scientists in China]. 

Wang, M., Li, H., Bukero, A.A., Shu, J., Zhuo, F., Liu, L. and Zhang, A. (2023) An evaluation of the crop preference and phenotypic characteristics of *Ceracris kiangsu* Tsai (Orthoptera: Arcypteridae) under different temperatures. *Biology* 12(11), 1377, 10 pp. <https://doi.org/10.3390/biology12111377> IF>2 

Wang, M., Li, H., Zhang, W., Zhuo, F., Li, T., **Lowry, A.** and **Zhang, A.** (2023) Reproduction system development of *Ceracris kiangsu* Tsai female adults and its relationship with fitness characteristics. *Frontiers in Physiology* 14, 1136559, 10 pp. <https://doi.org/10.3389/fphys.2023.1136559> IF>2 

Weyl, P.S.R., Hinz, H.L., Rwmushana, I., Mulema, J., Diaz-Soltero, H. and **Smith, D.** (2023) Building trust for sustainable access and benefit-sharing of biological control genetic resources: a CABI case study. *BioControl* 68(3), 291–297. <https://doi.org/10.1007/s10526-023-10200-x> IF>2 

Wu, C., **Zhang, F.**, Dewer, Y., **Zhang, J.** and **Li, F.** (2023) Exploration of candidate genes involved in the biosynthesis, regulation and recognition of the male-produced aggregation pheromone of *Halyomorpha halys*. *Insects* 14(2), 163, 12 pp. <https://doi.org/10.3390/insects14020163> IF>2 

Wu, F., Tang, Q., Zhang, L., Cui, J., Tian, L., Guo, R., Wang, L., Chen, B., Zhang, N., **Ali, S.**, **Lin, T.** and Jiang, P. (2023) Reducing irrigation and increasing plant density enhance both light interception and light use efficiency in cotton under film drip irrigation. *Agronomy* 13(9), 2248, 16 pp. <https://doi.org/10.3390/agronomy13092248> IF>2 

Xian, X., Zhao, H., **Humair, L.**, Yang, N., Li, J., **Weyl, P.** and **Liu, W.-x.** (2023) Niche shifts undermine the prediction performance of species distribution models: estimating potentially suitable areas for *Myriophyllum aquaticum* at the global scale. *Global Ecology and Conservation* 48, e02764, 12 pp. <https://doi.org/10.1016/j.gecco.2023.e02764> IF>2 

Yaméogo, I.S., Ouattara, D., Dabiré, R., Ki, A., Bationo, D., **Agboyi, L.**, Gnankiné, O., **Kenis, M.** and **Nacro, S.** (2023) Perception and management strategies of the fall armyworm, *Spodoptera frugiperda* J.E. Smith (1797) (Lepidoptera: Noctuidae) on maize, millet and sorghum by farmers in western Burkina Faso. *Advances in Entomology* 11(3), 204–222. <https://doi.org/10.4236/ae.2023.113015> 

Zhang, N., Feng, S., Duan, S., Yin, Y., Ullah, H., **Li, H.**, Davaasambuu, U., Wei, S., Nong, X., Zhang, Z., Tu, X. and **Wang, G.** (2023) LmFKBP24 interacts with LmEaster to inhibit the antifungal immunity of *Locusta migratoria*. *Pesticide Biochemistry and Physiology* 195, 105515, 9 pp. <https://doi.org/10.1016/j.pestbp.2023.105515> IF>2

Zhang, N., Feng, S., Tian, Y., Zhuang, L., Cha, G., Duan, S., **Li, H.**, Nong, X., Zhang, Z., Tu, X. and **Wang, G.** (2023) Identification, characterization and spatiotemporal expression analysis of the FKBP family genes in *Locusta migratoria*. *Scientific Reports* 13, 4048, 9 pp. <https://doi.org/10.1038/s41598-023-30889-1> IF>2 

Zhang, X., **Peck, L.D., Flood, J., Ryan, M.J.** and **Barracough, T.G.** (2023) Temperature contributes to host specialization of coffee wilt disease (*Fusarium xylarioides*) on arabica and robusta coffee crops. *Scientific Reports* 13, 9327, 12 pp. <https://doi.org/10.1038/s41598-023-36474-w> IF>2 

Zhao, S., Zhao, Q., Dai, X., Lv, B., Wang, R., Yin, Z., **Zhang, F.**, Liu, Y., Su, L., Chen, H., Zhang, L., **Li, H.**, **Xie, L.** and **Zhai, Y.** (2023) Control of two-spotted spider mite, *Tetranychus urticae*, on strawberry by integrating with cyetpyrafen and *Phytoseiulus persimilis*. *CABI Agriculture and Bioscience* 4, 54, 11 pp. <https://doi.org/10.1186/s43170-023-00196-w> [Correction: *CABI Agriculture and Bioscience* 5, 4 (2024), 1 pp. <https://doi.org/10.1186/s43170-023-00208-9>]. IF>2 

2.4.3. Book chapters and proceedings papers (8)

Grzywacz, D., Moore, S., **Luke, B.**, Subramanian, S., **Moore, D.** and Rabindra, R.J. (2023) Chapter 15 – Mass production of entomopathogens in less industrialized countries. In: Morales-Ramos, J.A., Guadalupe Rojas, M. and Shapiro-Ilan, D.I. (eds) *Mass Production of Beneficial Organisms (Second Edition), Invertebrates and Entomopathogens*. Academic Press, pp. 431–462. <https://doi.org/10.1016/B978-0-12-822106-8.00001-4>

Guo, J., **Rwomushana, I.** and Wang, Z. (2023) China–Africa Joint Force on Integrated Pest and Disease Management (IPM) for Food Security: fall armyworm as a showcase. In: Clarke, N., Peng, D. and Liu Clarke, J. (eds) *Innovation for Environmentally-friendly Food Production and Food Safety in China*. Springer, Singapore, pp. 233–252. https://doi.org/10.1007/978-99-2828-6_11

Harris, J., de Steenhuijsen Piters, B., McMullin, S., **Bajwa, B.**, de Jager, I. and Brouwer, I.D. (2023) Fruits and vegetables for healthy diets: priorities for food system research and action. In: von Braun, J., Afsana, K., Fresco, L.O. and Hassan, M.H.A. (eds) *Science and Innovations for Food Systems Transformation*. Springer, Cham, Switzerland, pp. 87–108. https://doi.org/10.1007/978-3-031-15703-5_6 

Klötzli, J., Suter, M., **Schaffner, U.**, Müller-Schräer, H. and Lüscher, A. (2023) Die kombinierte Wirkung von spezialisierten wurzelbohrenden Insekten und Pflanzenkonkurrenz reduziert das Wachstum von *Rumex obtusifolius* [Extended abstract]. In: Bibic, V. and Schmidtke, K. (eds) *One Step Ahead – einen Schritt voraus! Proceedings of the 16th Scientific Conference on Organic Agriculture, Frick, Switzerland, 7–10 March 2023*. Verlag Dr. Köster, Berlin, Germany, 4 pp. <https://orgprints.org/id/eprint/50542/> [In German with English abstract]. 

Ryan, M.J., **Kermode, A.** and **Smith, D.** (2023) Chapter 11 – Maintenance and storage of fungal plant pathogens. In: Lane, C.R., Beales, P.A. and Hughes, K.J.D. (eds) *Fungal Plant Pathogens: Applied Techniques*, 2nd edn. CAB International, Wallingford, UK, pp. 208–228. <https://doi.org/10.1079/9781800620575.0068>

Tarigan, S.I., **Tóth, S.**, Turóczi, G. and **Toepfer, S.** (2023) Can microbial plant biostimulants be useful for soil insect pest control? A review. In: Tarasco, E., Quesada-Moraga, E., Lopez-Ferber, M., Ruiu, L., Půža, V., Stephan, D. and Nermut', J. (eds) *Proceedings of the 18th Meeting ‘Microbial Control Agents in the Age of Global Change’ at České Budějovice, Czech Republic, 19–22 June 2022. IOBC/WPRS Bulletin* 162, 135–138.

Taylor, B., Zefack Tonnang, H.E., **Beale, T.**, **Holland, W.**, **Oronje, M.**, Abdel-Rahman, E.M., **Onyango, D.**, **Finegold, C.**, Zhu, J., Pozzi, S. and **Murphy, S.T.** (2023) Leveraging data, models & farming innovation to prevent, prepare for & manage pest incursions: delivering a pest risk service for low-income countries. In: von Braun, J., Afsana, K., Fresco, L.O. and Hassan, M.H.A. (eds) *Science and Innovations for Food Systems Transformation*. Springer, Cham, Switzerland, pp. 439–453. https://doi.org/10.1007/978-3-031-15703-5_23 

Toepfer, S., Vandebossche, B., **Toth, S.** and Ehlers, R.U. (2023) Novel strains of *Heterorhabditis bacteriophora* and symbiotic bacteria for a better control of the invasive maize pest western corn rootworm, *Diabrotica v. virgifera* (Coleoptera: Chrysomelidae). In: Tarasco, E., Quesada-Moraga, E., Lopez-Ferber, M., Ruiu, L., Půža, V., Stephan, D. and Nermut', J. (eds) *Proceedings of the 18th Meeting ‘Microbial Control Agents in the Age of Global Change’ at České Budějovice, Czech Republic, 19–22 June 2022. IOBC/WPRS Bulletin* 162, 100–103.

2.4.4. Case studies, study briefs, working papers and publications that were not peer-reviewed (21)

Bateman, M., Day, R., Rwomushana, I., Subramanian, S., Wilson, K., Babendreier, D., Luke, B. and Edgington, S. (2023) Assessing biopesticides for managing fall armyworm (*Spodoptera frugiperda*) in Africa. *Plant Health Cases*. CAB International, Wallingford, UK, 13 pp. <https://doi.org/10.1079/planhealthcases.2023.0012> ⓘ

Bueno, A.F., **Colmenarez, Y.C.**, Carnevali, R.A. and Plauter Sutil, W. (2023) Benefits and perspectives of adopting soybean-IPM: the success of a Brazilian programme. *Plant Health Cases*. CAB International, Wallingford, UK, 16 pp. <https://doi.org/10.1079/planhealthcases.2023.0006>

Cachat-Terrettaz, M., Christen, D., Sarrasin, C., Gilli, C., Mazzi, D., **Humair, L.** and **Seehausen, L.** (2023) Point sur la lutte contre la cochenille de Comstock. *Vignes et Vergers* 55(5), 14–15. Available at: https://www.revuevitiarbohorti.ch/wp-content/uploads/14cochenille_de_Comstock_doc_1429.pdf [In French]. ⓘ

Cannon, P.F. and **Minter, D.W.** (2023) *Porina* [*Porina aenea*, *P. boreri*, *P. byssophila*, *P. chlorotica*, *P. lectissima*, *P. leptalea*, *P. linearis*, *P. lucens*, *P. multipuncta*, *P. oxneri*]. *Descriptions of Fungi and Bacteria* 237(Nos 2341–2350), 62 pp.

Cherix, D., **Seehausen, L.** and Tschuy, M. (2023) Le frelon asiatique en Suisse en 2023 [French]. Il calabrone asiatico in Svizzera nel 2023 [Italian]. Asiatische Hornisse in der Schweiz im Jahr 2023 [German]. *Revue suisse d'apiculture* 8/2023, 321–326 [French]. *Rivista svizzera di apicoltura* 8/2023, 4–9 [Italian]. *Schweizerische Bienen-Zeitung* 08–23, 12–16. Available at: https://austausch.bienen.ch/_bienenzzeitung/magazine/2023/0823-SBZ-web.pdf [In German]. ⓘ

Danielsen, S. and Cartmell, S. (eds) (2023) Plantwise sustainability: two years on. Follow-up assessments in six countries. *CABI Working Paper* 32, 52 pp. <https://dx.doi.org/10.1079/CABICOMM-62-8173> ⓘ

Hinz, H. (2023) Woody weeds – the underestimated threat to biodiversity. *Rural* 21 57(4), 42–43. <https://www.rural21.com/english/current-issue/detail/article/woody-weeds-the-underestimated-threat-to-biodiversity.html> ⓘ

Kadzamira, M., Charles, L., Hevi, W., Kasoma, C., Ogunmodede, A. and Williams, F. (2023) Assessment of the use of CABI's pest risk decision support tools – Pest Risk Analysis Tool and Horizon Scanning Tool. *CABI Working Paper* 31, 26 pp. <https://dx.doi.org/10.1079/CABICOMM-62-8172> ⓘ

Kasoma, C. (2023) Cassava brown streak disease in Zambia: an integrated approach to managing an invasive viral disease of a clonal crop. *Plant Health Cases*. CAB International, Wallingford, UK, 10 pp. <https://doi.org/10.1079/planhealthcases.2023.0019>

Kothari, R., **Khanna, K., Romney, D.** and Koirala, P. (2023) Support for smallholders in Nepal – are community business facilitators the answer? *Rural* 21, 4 September 2023. <https://www.rural21.com/english/news/detail/article/support-for-smallholders-in-nepal-are-community-business-facilitators-the-answer.html> ⓘ

Luke, B. (2023) Improving uptake of biopesticides for desert locust control. *Plant Health Cases*. CAB International, Wallingford, UK, 12 pp. <https://doi.org/10.1079/planhealthcases.2023.0020>

Makale, F., Kansiime, M.K. and Rwomushana, I. (2023) Papaya mealybug in Kenya: identification, management, and future outlook. *Plant Health Cases*. CAB International, Wallingford, UK, 12 pp. <https://doi.org/10.1079/planhealthcases.2023.0018> ⓘ

Minter, D.W. and Cannon, P.F. (2023) Xylariaceae [*Amphirosellinia evansii*, *Astrocytis sublimbata*, *Hypocopra equorum*, *Nemania confluens*, *N. maritima*, *Podosordaria tulasnei*, *Rosellinia franciscae*, *R. helvetica*, *Xylaria cinerea*, *X. crozonensis*]. *Descriptions of Fungi and Bacteria* 236(Nos 2331–2340), 44 pp.

Mugambi, I., Danielsen, S., Kansiime, M., Makale, F., Chacha, D., Rware, H. and Chege, F. (2023) Are integrated crop-livestock clinics an option for Kenyan smallholder farmers to address One Health issues? *CABI Study Brief 44: Learning*, 11 pp. <https://dx.doi.org/10.1079/CABICOMM-62-8171> ⓘ

Njenga, M.W., Hevi, W., Neave, S., Karanja, L., Bitange, N. and Kansiime, M.K. (2023) Insights into farmer group effectiveness for promoting the adoption of food production standards. *CABI Study Brief 46: Learning*, 17 pp. <https://dx.doi.org/10.1079/CABICOMM-62-8176> ⓘ

Nyamekye, H., **Terefe, B.**, **Duah, S.** and **Davis, T.** (2023) Assessing indicators of change in the delivery of gendered agricultural extension in Ghana. *CABI Study Brief 45: Learning*, 9 pp. <https://dx.doi.org/10.1079/CABICOMM-62-8175> 

Pandit, V. and Chako, J. (2023) Establishing a treatment facility for ISPM 15-approved treatments in India. In: *Guide to Regulation of Wood Packaging Material – Understanding the Phytosanitary Requirements for the Movement of Wood Packaging Material in International Trade*. FAO on behalf of the Secretariat of the International Plant Protection Convention, Rome, pp. 52–53. <https://doi.org/10.4060/cc5059en> 

Rehman, A. and Kalaugher, L. (2023) Strategies for the biological control of *Parthenium hysterophorus* L. in eastern Pakistan. *Plant Health Cases*. CAB International, Wallingford, UK, 13 pp. <https://doi.org/10.1079/planhealthcases.2023.0008>

Rwomushana, I., **Beale, T.**, Chipabika, G., **Day, R.**, **Gonzalez-Moreno, P.**, **Lamontagne-Godwin, J.**, **Makale, F.**, **Pratt, C.** and **Tambo, J.** (2023) Strategies for sustainable management of the tomato leafminer (*Tuta absoluta*) in Africa. *Plant Health Cases*. CAB International, Wallingford, UK, 14 pp. <https://doi.org/10.1079/planhealthcases.2023.0021>

Sharp, C. and **Minter, D.W.** (2023) Some *Termitomyces* (2) [*Termitomyces mammiformis*, *T. microcarpus*, *T. reticulatus*, *T. schimperi*, *T. umkowaan*]. *Descriptions of Fungi and Bacteria* 235(Nos 2326–2330), 60 pp.

Williams, F., van Marwijk, A., **Rware, H.**, Essegbe, G., Besah, P., **Duah, S.**, **Hevi, W.**, Karbo, N., Quaye, W. and Watiti, J. (2023) Implementation of fall armyworm management plan in Ghana. *Plant Health Cases*. CAB International, Wallingford, UK, 13 pp. <https://doi.org/10.1079/planhealthcases.2023.0013>

2.4.5. Completed theses (9)

Buhari, A.K. (2023) Biology and host specificity of an Asian box tree moth parasitoid, candidate for classical biological control in Europe and North America. MSc thesis, University of Padova, Italy, 28 pp. Supervised: Scaccini, D., **Seehausen, M.L.** and Norgrove, L.

Chen, B. (2023) The impact of environment on major crop loss in Ethiopia and on a regional scale: based on households' responses from panel data. MSc thesis, Imperial College London, UK, 37 pp. Supervised: **Szyniszewska, A.**

Chen, M. (2023) Assessing the impact of insect pests (*Spodoptera frugiperda* and *Busseola fusca*) on maize production in Africa. MSc thesis, Imperial College London, UK, 27 pp. Supervised:

Szyniszewska, A.

Fallet, P. (2023) Biological control of fall armyworm with encapsulated entomopathogenic nematodes. PhD thesis, University of Neuchâtel, Switzerland, 131 pp. Supervised: Turlings, T., **Toepfer, S.**, Junier, P. and Hiltpold, I.

Humbeeck, T. (2023) Enhancing the establishment of the rust fungus *Puccinia komarovii* var. *glanduliferae*, a biological control agent of Himalayan balsam. MSc thesis, Royal Holloway, University of London, UK and Kew, UK, 23 pp. Supervised: Ratto, F., **Varia, S.**, **Pollard, K.M.** and **Taylor, B.**

Pessina, A. (2023) Investigating the ecology and behaviour of potential biological control agents for parrot's feather management. MSc thesis, University of Neuchâtel, Switzerland, 68 pp. Supervised: Rasmann, S. and **Weyl, P.**

Prayoonrat, P. (2023) Modelling the global distribution of the hepatocarcinogenic fungi: *Aspergillus flavus* using CLIMEX and ensemble models. MSc thesis, Imperial College London, UK, 23 pp. Supervised: **Szyniszewska, A.** and Bidartondo, M.

Tian, X. (2023) 茶翅蝽沟卵蜂防治茶翅蝽的释放技术及防控效果研究 [Study on the release technology and control effect of *Triissolcus japonicus* against *Halyomorpha halys*]. MSc thesis, Jilin Agricultural University, China, 54 pp. Supervised: Shi, S.S. and **Zhang, J.**

Valenti, R. (2023) Assessment of the tachinid fly *Istocheta aldrichi* as a possible classical biological control agent of the Japanese beetle *Popillia japonica* in Switzerland. MSc thesis, ETH Zurich, Switzerland, 74 pp. Supervised: Maurhofer Bringolf, M. and **Seehausen, M.L.**

2.4.6. Published datasets (2)

Szyniszewska, A. (2023) Mediterranean fruit fly (medfly) *Ceratitis capitata* (Diptera, Tephritidae) occurrence data. Figshare. <https://doi.org/10.6084/m9.figshare.23721477>

Szyniszewska, A. and Hassall, K. (2023) Cassava field perimeters survey in Uganda and Côte d'Ivoire, 2018. Figshare. <https://doi.org/10.6084/m9.figshare.23657391>

2.4.7. 2022 publications not previously listed (1)

Sivapragasam, A. (2022) Biopesticides and their regulation in Malaysia. *Asia Pacific Biofertilizers and Biopesticides Information Platform*. 9 pp. <https://apbb.fftc.org.tw/article/308> 

2.5. Scientific project reports (65)

Ali, K., Ahmad, S., Asad, Z., Qureshi, M.S., Nazir, T., Sanam, S., Khan, M.H., Wasim, B. and Ali, M. (2023) Report of Farmers' Feedback on Training Program 'Insect Pest Identification, Sustainable Crop Protection Practices/IPM and Safe Use of Pesticides for Enhanced Food Security and Resilient Agriculture in Pakistan' in Balochistan province. Unpublished report, CABI, Rawalpindi, Pakistan, 52 pp.

Ali, K., Ahmad, S., Nazir, T., Sanam, S., Khan, M.H., Qureshi, M.S., Asad, Z., Wasim, B. and Ali, M. (2023) Report of Farmers' Feedback on Training Program 'Insect Pest Identification, Sustainable Crop Protection Practices/IPM and Safe Use of Pesticides for Enhanced Food Security and Resilient Agriculture in Pakistan' in Sindh province. Unpublished report, CABI, Rawalpindi, Pakistan, 57 pp.

Ali, K., Ahmad, S., Qureshi, M.S., Nazir, T., Asad, Z., Wasim, B. and Ali, M. (2023) Report of Farmers' Feedback on Training Program 'Insect Pest Identification, Sustainable Crop Protection Practices/IPM and Safe Use of Pesticides for Enhanced Food Security and Resilient Agriculture in Pakistan' in Punjab province. Unpublished report, CABI, Rawalpindi, Pakistan, 66 pp.

Barber, E., Simpkins, K., Thomas, L., Huntington, B., Rushton, J., **Beale, T., Szyniszewska, A., Finegold, C.** and Woolman, T. (2023) All hazard modelling for multiple food sectors under the OneFood programme. Unpublished final report to CEFAS, University of Liverpool and CABI, UK, 108 pp.

CABI (2023) Commercial Agriculture Portfolio Review 2022. Wallingford, UK, viii + 89 pp. <https://www.casaprogramme.com/wp-content/uploads/2023/06/Commercial-Agriculture-Portfolio-Review-2022.pdf>

Cortat, G. and **D'Haese, R.** (2023) Biological control of hawkweeds, *Pilosella* spp. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 17 pp.

Cortat, G. and **D'Haese, R.** (2023) Biological control of swallow-worts, *Vincetoxicum rossicum* and *V. nigrum*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 10 pp.

Cortat, G., D'Haese, R. and **Hinz, H.L.** (2023) Biological control of garlic mustard, *Alliaria petiolata*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 12 pp.

Cortat, G., Toševski, I., D'Haese, R. and **Hinz, H.L.** (2023) Biological control of field bindweed, *Convolvulus arvensis*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 17 pp.

Crozier, J., Beeken, J., Ariza Salamanca, A.J. and **González-Moreno, P.** (2023) Phase II – Cocoa Agroforestry Project: analysis of the environmental, agronomic and economic factors affecting cocoa production under different agroforestry systems. Final Report for Year 3 (2022/2023 season). Unpublished report, CABI, Egham, UK, 62 pp.

Djeddour, D., Kurose, D., Pollard, K., Pratt, C., Seier, M., Shaw, R., Thomas, S., Varia, S. and **Wood, S.** (2023) Biocontrol of water framework directive weeds, Defra project 32570/ECM 61612. Progress December 2022–March 2023. Unpublished report, CABI, Egham, UK, 39 pp.

Djeddour, D., Kurose, D., Pollard, K., Pratt, C., Seier, M., Shaw, R., Thomas, S., Varia, S. and Wood, S. (2023) Biocontrol of water framework directive weeds, Defra project 32570/ECM 61612. Progress April 2023–November 2023. Unpublished report, CABI, Egham, UK, 93 pp.

Djeddour, D., Pratt, C., Wood, S., Tilling, A., Kurose, D. and Berman, C. (2023) Biological control of floating pennywort, *Hydrocotyle ranunculoides* in the Colne Valley, Environment Agency project. Final report (20 June 2022–31 March 2023). Unpublished report, CABI, Egham, UK, 14 pp.

Djeddour, D., Pratt, C., Wood, S., Tilling, A., Kurose, D. and Berman, C. (2023) Biological control of floating pennywort, *Hydrocotyle ranunculoides* in Pevensie Levels, Environment Agency project. Final report (12 June 2022–31 March 2023). Unpublished report, CABI, Egham, UK, 11 pp.

Djeddour, D., Pratt, C., Wood, S., Tilling, A., Kurose, D. and Berman, C. (2023) Biological control of floating pennywort, *Hydrocotyle ranunculoides* on the Wey Navigation, Environment Agency project. Final report (12 August 2022–31 March 2023). Unpublished report, CABI, Egham, UK, 10 pp.

Djeddour, D., Pratt, C., Wood, S., Tilling, A., Kurose, D. and Berman, C. (2023) Biological control of floating pennywort, *Hydrocotyle ranunculoides*, Canal and River Trust project. Final report (1 June 2022–31 March 2023). Unpublished report, CABI, Egham, UK, 13 pp.

Djeddour, D., Pratt, C., Wood, S., Tilling, A., Kurose, D. and Berman, C. (2023) Biological control of floating pennywort, *Hydrocotyle ranunculoides*, Canal and River Trust project. Progress report (1 May 2023–12 December 2023). Unpublished report, CABI, Egham, UK, 3 pp.

Djeddour, D., Pratt, C., Wood, S., Tilling, A., Kurose, D. and Berman, C. (2023) Biological control of floating pennywort, *Hydrocotyle ranunculoides*, Yorkshire Water project. Final report (23 August 2022–1 July 2023). Unpublished report, CABI, Egham, UK, 10 pp.

Gossner, M., Eisenring, M., **Kenis, M.** and **Seehausen, M.L.** (2023) PARASEARCH: Test der Wirksamkeit verschiedener europäischer Parasitoide des Eschenprachtkäfers und Abklärung von ökologischen Nebenwirkungen. Zwischenbericht zum BAFU Projekt. Unpublished report, WSL, Birmensdorf, Switzerland, 32 pp.

Häfliger, P., Birkmire, S., Fenijn, F., Closca, C., Thomas, S., Kurose, D. and Hinz, H.L. (2023) Biological control of flowering rush, *Butomus umbellatus*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 16 pp.

Häfliger, P., Kostyniuk, L., McQueen, L., Closca, C. and Weyl, P. (2023) Biological control agents for invasive *Phragmites* in Ontario. Annual report 2023. Unpublished report, CABI, Delémont, Switzerland, 7 pp.

Haye, T. (2023) Estimating the potential impact of *Trissolcus japonicus* on *Pentatoma rufipes*. Final report 2023. Unpublished report, CABI, Delémont, Switzerland, 31 pp.

Haye, T., Häner, N., Heuver, N. and Younie, S. (2023) Arthropod Biological Control Program. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 60 pp.

Horrocks, K., Seehausen, M.L., Maggini, R., Valenti, R., Kenis, M. and Collatz, J. (2023) Preemptive risk–benefit assessment for biocontrol agents of high-risk pests in Switzerland. Unpublished report, CABI, Delémont, Switzerland, 19 pp.

Humair, L., Pessina, A. and Weyl, P. (2023) Biological control of parrot's feather, *Myriophyllum aquaticum*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 42 pp.

Kenis, M., Seehausen, M.L., Valenti, R., Deiss, F., Haye, T. Marazzi, C., Meier, M. and Jelmini, L. (2023) Classical Biological Control of Japanese Beetle. Interim report 2023. Unpublished report, CABI, Delémont, Switzerland, 15 pp.

Kurose, D. and Seier, M.K. (2023) Classical biological control of navua sedge (*Cyperus aromaticus*) using the rust fungus *Uredo kyllingae-erectae*. Progress report 5 (16 December 2022–15 April 2023). Unpublished report, CABI, Egham, UK, 10 pp.

Kurose, D. and Seier, M.K. (2023) Classical biological control of navua sedge (*Cyperus aromaticus*) using the rust fungus *Uredo kyllingae-erectae*. Progress report 6 (16 April–30 May 2023). Unpublished report, CABI, Egham, UK, 11 pp.

Kurose, D., Ellison, C.A.† and **Seier, M.K.** (2023) Biological control of navua sedge (*Cyperus aromaticus* (Ridl.) Mattf. & Kük.) using the flower smut fungus *Cintractia kyllingae*. Final report (19 September 2020–1 March 2023). Unpublished report, CABI, Egham, UK, 26 pp.

Kurose, D., Ellison, C.A.† and **Seier, M.K.** (2023) Biological control of navua sedge (*Cyperus aromaticus* (Ridl.) Mattf. & Kük.) using the flower smut fungus *Cintractia kyllingae*. Final report (19 September 2020–30 June 2023). Unpublished report, CABI, Egham, UK, 26 pp.

Li, H., Chen, X., Tian, F., Zhang, F., Zhang, J., Wan, M. et al. (2023) 2022 Annual report and 2023 workplan of MARA–CABI Joint Laboratory for Bio-safety. Unpublished report, CABI East and Southeast Asia, CABI Switzerland and Institute of Plant Protection, Chinese Academy of Agricultural Sciences, 126 + 12 pp. [In English and Chinese].

Li, H., Zhang, F., Zhang, J., Wan, M., Kuhlmann, U., Zbie, J., Hinz, H., Fang, T. and Toepfer, S. (2023) 2023 Annual report and 2024 work plan of MARA–CABI Joint Laboratory and European Laboratory. Unpublished report, CABI, Beijing, China and CABI, Delémont, Switzerland, 73 pp.

Malik, A.H., **Ahmad, S.** and **Ali, K.** (2023) Development of technologies or practices related to climate-adaptive seed development and crop production. Unpublished report, CABI, Rawalpindi, Pakistan, 37 pp.

Marini, F., Cristofaro, M., Mecca, G., Vidović, B., **Hinz, H.L., Weyl, P.** and **Stutz, S.** (2023) Biological control of tree of heaven, *Ailanthus altissima*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 16 pp.

Ochilo, W., Niyongere, C., Ndayihanzamaso, P., Mugambi, I., Onyango, D., Chacha, D., Toepfer, S., Grossrieder, M. and Vos, J. (2023) Plantwise in Burundi. Annual report 2022. CABI, Nairobi, Kenya and CABI, Delémont, Switzerland, 28 pp. <https://www.cabi.org/wp-content/uploads/Plantwise-in-Burundi-annual-report-2022-EN.pdf>

Pollard, K.M. and **Seier, M.K.** (2023) The biological control of cat's claw creeper, *Dolichandra unguis-cati* (L.) L.G. Lohmann. Final report (1 June 2018–31 June 2023). Unpublished report, CABI, Egham, UK, 51 pp.

Pratt, C. and **Varia, S.** (2023) Biological control of *Crassula helmsii* using the mite *Aculus crassulae* at Potteric Carr, Doncaster and Rossett Nature Reserve, Harrogate. Yorkshire Water Progress Report. Unpublished report, CABI, Egham, UK, 6 pp.

Pratt, C., Maczey, N. and Seier, M. (2023) Assessment of natural enemies for *Carpobrotus edulis* biocontrol. Natural England Progress Report. Unpublished report, CABI, Egham, UK, 40 pp.

Seehausen, M.L.. Cachat-Terrettaz, M., Gilli, C., **Humair, L..** Sutter, L. and Mazzi, D. (2023) Développement de la lutte biologique contre la cochenille farineuse dans les cultures arboricoles en Suisse. Rapport final. Unpublished report, CABI, Delémont, Switzerland, 33 pp.

Seehausen, M.L., Deiss, F., Buhari, A. and Kenis, M. (2023) The parasitoid complex of the box tree moth in Asia for classical biological control in North America. Intermediate Report June 2023. Unpublished report, CABI, Delémont, Switzerland, 9 pp.

Seehausen, M.L., Humair, L., Pirelli, M. and Kenis, M. (2023) Experimentelle Freisetzung von *Ganaspis cf. brasiliensis*. Zwischenbericht 2023. Unpublished report, CABI, Delémont, Switzerland, 6 pp.

Seehausen, M.L.. Park, I., Kim, S., Kim, J., Lim, E.J., **Deiss, F.** and **Kenis, M.** (2023) The parasitoid complex of the box tree moth in Asia for classical biological control in North America and Europe. Intermediate Report 2022. Unpublished report, CABI, Delémont, Switzerland, 7 pp.

Seier, M.K., Ellison, C.A.†, Kurose, D.K. and Tilling, A. (2023) Consultancy: development of an agent for the biological control of the invasive blackberry (*Rubus niveus*) in the Galapagos Islands. Eighth report (1 May–30 September 2023). Unpublished report, CABI, Egham, UK, 28 pp.

Seier, M.K., Ellison, C.A.†, Kurose, D.K. and Tilling, A. (2023) Consultancy: development of an agent for the biological control of the invasive blackberry (*Rubus niveus*) in the Galapagos Islands. Ninth report (1 October–31 December 2023). Unpublished report, CABI, Egham, UK, 25 pp.

Seier, M.K., Ellison, C.A.†, Kurose, D.K., Tilling, A. and Pollard, K.M. (2023) Consultancy: development of an agent for the biological control of the invasive blackberry (*Rubus niveus*) in the Galapagos Islands. Seventh report (1 January–30 April 2023). Unpublished report, CABI, Egham, UK, 18 pp.

Seier, M.K., Pollard, K.M. and Kurose, D.K. (2023) The biological control of invasive devil's claw (*Cryptostegia madagascariensis* Bojer ex Decne) in north-eastern Brazil. Final report (1 March 2018–31 October 2023). Unpublished report, CABI, Egham, UK, 83 pp.

Stutz, S. and Petig, C. (2023) Biological control of oxeye daisy, *Leucanthemum vulgare*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 20 pp.

Stutz, S., Cloșca, C. and Petig, C. (2023) Biological control of perennial pepperweed, *Lepidium latifolium*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 12 pp.

Stutz, S., Petig, C. Dolgovskaya, M.Yu., Volkovitsh, M. and Reznik, S. (2023) Biological control of common tansy, *Tanacetum vulgare*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 19 pp.

Tambo, J., Kadzamira, M., Chaudhary, M., Rware, H., Likoko, L., Mbugua, F., Faisal, S. and Williams, F. (2023) Impact Assessment of the Global Action on Fall Armyworm Control. March 2023. Unpublished report submitted to the FAO, CABI, Nairobi, Kenya, 117 pp.

Toepfer, S. (2023) Testing botanicals with insecticidal properties against adults of *Diabrotica v. virgifera* under field conditions in maize. Project report for Lithos Crop Protect GmbH Austria. Confidential unpublished report, CABI, Delémont, Switzerland and CABI, Hodmezovasarhely, Hungary, 28 pp.

Toepfer, S. (2023) Effect of natural-source insecticides on adults of the maize pest *Diabrotica v. virgifera* under laboratory conditions. Project report for Lithos Crop Protect GmbH Austria. Confidential unpublished report, CABI, Delémont, Switzerland and CABI, Hodmezovasarhely, Hungary, pp. 37.

Toševski, I., Hinz, H.L., Kristić, O. and Jović, J. (2023) Biological control of Dalmatian and yellow toadflaxes, *Linaria dalmatica* and *L. vulgaris*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 31 pp.

Varia, S., Wood, S., Pratt, C., Berman C. and Alexander, T. (2023) Implementation of a biological control strategy for *Crassula helmsii* using the mite, *Aculus crassulae* in the UK. Unpublished report, CABI, Egham, UK, 14 pp.

Weyl, P. and Humair, L. (2023) Biological control of Russian knapweed, *Rhaponticum repens*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 11 pp.

Weyl, P. and Humair, L. (2023) Biological control of Russian olive, *Elaeagnus angustifolia*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 8 pp.

Weyl, P., Cloșca, C., Mack, A. and Hinz, H.L. (2023) Biological control of dyer's woad, *Isatis tinctoria*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 11 pp.

Weyl, P., Cloșca, C., Mack, A. and Hinz, H.L. (2023) Biological control of whitetops, *Lepidium draba*, *L. chalepense* and *L. appelianum*. Annual report 2022. Unpublished report, CABI, Delémont, Switzerland, 12 pp.

Wood, S. and Varia, S. (2023) Biological control of Australian swamp stonecrop and Himalayan balsam in Wales (March 2022–2023). Unpublished report submitted to the Welsh Government, CABI, Egham, UK, 23 pp.

Woolman, T., Sucena Afonso, J., Simpkins, K., Thomas, L., Huntington, B., Gilbert, W., Rushton, J., **Szyniszewska, A., Mahmood, S., Rodrigue Diakité, Z., Oliver, G., Taylor, B. and Finegold, C.** (2023) Interim Report – All hazard modelling for multiple food sectors under the One Food programme. Unpublished interim report to CEFAS, University of Liverpool and CABI, UK, 66 pp.

Zhang, J., Bai, Y., Gao, L., Ali, M. and Zhang, F. (2023) Parasitoids fecundity and natural mortality of *Trissolcus japonicus* on BMSB. December 2023. Unpublished report, CABI, Beijing, China, 18 pp.

Zhang, J., Bai, Y., Tian, X. and Zhang, F. (2023) Field assessment of seasonal occurrence of *Lycorma delicatula* White (Hemiptera: Fulgoridae), the spotted lanternfly, and its potential impacts to kiwifruit orchards. March 2023. Unpublished report, CABI, Beijing, China, 14 pp.

Zhang, J., Chen, J., Li, W., Tian, X. and Zhang, F. (2023) Optimising biocontrol for brown marmorated stink bug (BMSB) in kiwifruit. May 2023. Unpublished report, CABI, Beijing, China, 61 pp.

Zhang, J., Tian, X., Bai, Y., Luo, Z. and Zhang, F. (2023) BMSB impacts and phenology on kiwifruit and associated parasitoids. Unpublished report, CABI, Beijing, China, 47 pp.

Zhang, Q., Wan, M., Phiri, N., Bundi, M. and Kou, Y. (2023) Establishment of a Knowledge Hub at the NARDI, Botswana: Needs Assessment Report. December 2023. Unpublished report, CABI, 35 + 18 pp.

2.6. Oral presentations at scientific meetings (105)

CABI authors are shown in **bold**, the presenting author is underlined.

Babendreier, D., Agboyi, L.K. and Kenis, M. (2023) Augmentative biological control of fall armyworm: how can we make it work? 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Bateman, M. (2023) Findings and recommendations of CropLife study on the private sector response to invasive pest. CropLife International Responsible Use/IPM team meeting, 20 April 2023 (webinar).

Bateman, M. (2023) Overview of the findings and recommendations from two reports for project with USDA-FAS. AU SPS Coordination Forum, 18–20 September 2023, Accra, Ghana.

Chaudhary, M. (2023) International perspective and best practices in management of invasive species: success stories from CABI's experience. International Workshop on Management of Forest Invasive Species, 2–3 February 2023, Mettupalayam, India.

Cherix, D. and Seehausen, M.L. (2023) Bekämpfung der Asiatischen Hornisse mit Mikrosendern. BAU Fachtagung Biotechnologie, 2 November 2023, Bern, Switzerland.

Colmenarez, Y. (2023) Avances e Innovaciones en el uso de Control Biológico en programas de MIP en América Latina. 5th Encuentro Entomológico Ecuatoriano and 3rd Congreso Ecuatoriano de Control Biológico, 20–22 September 2023, Guayaquil, Ecuador.

Colmenarez, Y. (2023) CABI's work to increase the adoption of IPM and biological control in Latin America and the Caribbean. Annual Meeting of Entomological Society of America, 5–8 November 2023, National Harbor, Maryland, USA.

Colmenarez, Y., Corniani, N. and Edgington, S. (2023) Climate Smart Agriculture strategies in Latin America. ESA International Branch Virtual Symposium, 24–26 April 2023 (online).

Colmenarez, Y., Vásquez, C. and **Corniani, N.** (2023) The use of insects as biological control agents in sustainable food production in Latin America in the Plantwise program. 7th International Entomophagous Insects Conference (7IEIC), 17–21 April 2023, Buenos Aires, Argentina.

Colmenarez, Y.C. (2023) Demandas e oportunidades do controle biológico: uma visão global. 17th Simpósio de Controle Biológico (Siconbiol), 23–27 July 2023, Juazeiro-Petrolina, Brazil.

Colmenarez, Y.C., Vásquez, C. and Gómez, L.M. (2023) Benefícios socioeconômicos do controle biológico: casos de estudo na América Latina. 17th Simpósio de Controle Biológico (Siconbiol), 23–27 July 2023, Juazeiro-Petrolina, Brazil.

Colmenarez, Y.C., Vásquez, C., Medina, L., **Corniani, N.** and Rivadeneira, G. (2023) Manejo Integrado de *Spodoptera frugiperda* na América Latina e a incorporação de produtores como parte do processo de avaliação e adoção. 17th Simpósio de Controle Biológico (Siconbiol), 23–27 July 2023, Juazeiro-Petrolina, Brazil.

Corniani, N., Colmenarez, Y., Vásquez, C. and Gómez, L.M. (2023) Implementação de programas de controle biológico como parte do manejo integrado de pragas na América Latina: estudo de caso do programa Plantwise. 17th Simpósio de Controle Biológico (Siconbiol), 23–27 July 2023, Juazeiro-Petrolina, Brazil.

Day, R. (2023) Fall armyworm; lessons for managing future invasive pests. FAO Global Symposium on Sustainable Fall Armyworm Management (GS-FAW), 31 October–2 November 2023, Beijing, China.

Dhileepan, K., Hereward, J., **Kurose, D.**, Shi, B., **Seier, M.K.** and Shivas, R. (2023) Biological control of Navua sedge (*Cyperus aromaticus*): challenges due to genetic differences in the target weed. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Djeddour, D. (2023) Establishment biocontrol: case studies from the UK. International Scientific Workshop 'Diversifying Business Models for Biocontrol Deployment', 31 May–2 June 2023, Paris, France.

Djeddour, D. and **Seier, M.** (2023) Navigating regulatory procedures for weed biological control using non-native agents in the UK. New IPM: One Health symposium, 5–7 September 2023, Swansea University, Wales, UK.

Djeddour, D. and **Wood, S.** (2023) Strategic alliances in the management of *Hydrocotyle ranunculoides* (Apiales: Araliaceae) – using beetles to come together. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Fallet, P., Bazagwira, D., Ruzzante, L., Guenat, J.M., Levivier, S., Karangwa, P., Ingabire, G., Kajuga, J., Mukundwa, I.P., Bustos-Segura, C., **Toepfer, S.** and Turlings, T.C.J. (2023) A gel formulation of entomopathogenic nematodes to control caterpillars of the fall armyworm, *Spodoptera frugiperda*: an effective, safe and sustainable alternative to chemical insecticides. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Haye, T. (2023) Consequences of competitive interactions between parasitoids for biological control. Entomologentagung, 20–23 February 2023, Freie Universität Bozen, Italy (invited keynote).

Haye, T., Bauer Pilla, R. and Tortorici, F. (2023) Mortality factors of the red-legged shield bug, *Pentatomidae* (Hemiptera: Pentatomidae), an emerging pest in European fruit orchards. XII European Congress of Entomology, 16–20 October 2023, Heraklion, Crete, Greece.

Haye, T., Moraglio, S., Tortorici, F., Gariepy, T. and Tavella, L. (2023) Impact of *Trissolcus japonicus* on native stink bugs in Europe. 5th meeting of the IOBC-WPRS Working Group 'Benefits and Risks of Exotic Biological Control Agents', 11–14 September 2023, Aveiro, Portugal.

Haye, T., Seehausen, M.L., Valenti, R. and **Kenis, M.** (2023) Updates from CABI in Switzerland. Japanese Beetle Biological Control working group meeting, 6 December 2023 (online).

Hinz, H.L. (2023) Improving pre-release studies on safety and effectiveness. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Hinz, H.L., Eschen, R. and **Schaffner, U.** (2023) Integrated Landscape Management (ILM), an inclusive approach to tackle invasive non-native plants. 4th International Congress on Biological Invasions, 1–4 May 2023, Ōtautahi Christchurch, Aotearoa New Zealand.

Isaac, A. (2023) Exploring the concept of defining knowledge requirements in digital development programmes. World Literacy Summit, 2–4 April 2023, Oxford, UK.

Isaac, A. (2023) Taking the people first approach for FAIR implementation. SciDataCon Conference, 23–26 October 2023, Salzburg, Austria.

Jadhav, A. (2023) Enabling data access, sharing and reuse. Global Digital Development Forum, 26–27 April 2023 (online).

Jadhav, A. (2023) Enabling data access, sharing & reuse. International Conference on Open and FAIR Data Ecosystem Principles, Policies, and Platforms, 11–13 September 2023, New Delhi, India (invited speaker).

Kenis, M. (2023) High parasitism on fall armyworm in Africa and Asia. Where do all these parasitoids come from? 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Kenis, M. (2023) Invasive insects in urban landscapes – pests, friends and allies. XII European Congress of Entomology, 15–20 October 2023, Heraklion, Crete, Greece (keynote speaker).

Kenis, M. and **Seehausen, M.L.** (2023) Establishment biological control – Classical biological control – Biological control by introduction. Workshop 'Diversifying Business models for Biocontrol Deployment', 31 May–2 June 2023, Paris, France.

Kontschán, J., Bozsik, G., Dorner, Z., Zalai, M., **Toepfer, S.**, Ivanyi, D., Kiss, J. and Kiss, B. (2023) The ragweed leaf beetle (*Ophraella communa*) in Hungary – recent results. 69th Hungarian Plant Protection Days, 21 February 2023, Budapest, Hungary.

Kuhlmann, U. (2023) The importance of pest preparedness approaches to improve food safety and food security. International Symposium on Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, China.

Kuhlmann, U., **Jenner, E.** and **Shirley, K.** (2023) Introducing the CABI BioProtection Portal. Biological Products Industry Alliance (BPIA) Annual Meeting, 20–22 February 2023, Reno, Nevada, USA.

Kuhlmann, U., **Reeder, R.**, **Curry, C.**, **Cameron, K.** and **Jenner, W.** (2023) Digital agriculture: digital farm advisory – opportunities and challenges. 12th Meeting of G20 Agricultural Chief Scientists (MACS), 17–19 April 2023, Varanasi, India.

Kuhlmann, U., **Taylor, B.**, **Szyniszewska, A.** and **Jenner, E.** (2023) Harnessing the power of data for plant health and environmental protection. International Day of Plant Health (IDPH), 12 May 2023, Sheikh Zayed Centre – FAO HQ, Rome, Italy, hybrid event (online).

Kurose, D., Jones, I.M., **Pratt, C.F.**, **Thomas, S.E.**, Bourchier, R. and **Shaw, R.H.** (2023) Seeking better versions of the same agent *Aphalaria itadori* – the knotweed story continues. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Li, H., Tian, F., **Zhang, F.**, Liu, W. and **Zhang, J.** (2023) Cooperation on cross-border plant pests and diseases joint prevention and control. 1st China–Malaysia Technical Working Group Meeting on Agricultural Science and Technology, 18 September 2023, Beijing, China.

Li, H., Tian, F., **Zhang, F.**, Liu, W. and **Zhang, J.** (2023) Strengths and gaps in cooperation on management of transboundary plant pests and diseases. International Symposium on Plant Biosafety, 30 October–1 November 2023, Kunming, Yunnan, China.

Li, H., **Wang, M.**, **Luke, B.**, **Zhang, F.** and Wang, G. (2023) Improving the effectiveness of fungal biopesticides for sustainable locust management. 4th Conference on RS of Vegetation Pests and Diseases, 18–20 August 2023, Inner Mongolia, China.

Li, H., **Wang, M.**, **Zhang, F.**, **Luke, B.** and **Kuhlmann, U.** (2023) Improve locust management: from the temperature to thermoregulation. Annual meeting of 'Anhui–CABI Joint Laboratory for Agricultural Pest Control' and academic seminar on green control technology on crop pests, 17–19 July 2023, Hefei, Anhui, China.

Li, H., **Zhang, F.**, **Taylor, B.** and **Kuhlmann, U.** (2023) Innovative technologies for farm advisory with some examples in FAW management. FAO Global Symposium on Sustainable Fall Armyworm Management, 31 October–2 November 2023, Beijing, China.

Maczey, N. (2023) Dealing with invasive species on the South Atlantic UKOTs using biological control. Webinar 'Terrestrial Restoration and Invasive Non-Native Species in the UK Overseas Territories and Crown Dependencies', UK Overseas Territories Conservation Forum, 6–7 March 2023.

Martin, G.D., **Weyl, P.S.R.**, **Humair, L.F.**, Chikowore, G. and Wolmans, A. (2023) Determining ecological host range and invaded range phylogenies. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Msengezi, C. and **Issac, A.** (2023) Leveraging FAIR for better data governance. Master Data Management Conference Europe & Data Governance Conference Europe, 9–12 May 2023, London, UK.

Mulema, J. (2023) Prioritization of invasive alien pests with the potential to threaten agriculture, biodiversity, and forestry in Africa through horizon scanning. 4th International Congress on Biological Invasions, 1–4 May 2023, Ōtautahi Christchurch, Aotearoa New Zealand.

Mulema, J. (2023) Employing horizon scanning to prioritize invasive alien pests with the potential to threaten agriculture, biodiversity, and forestry in Africa. 12th International Congress of Plant Pathology, 20–25 August 2023, Lyon, France.

Nagpal, A. and **Jadhav, A.** (2023) Adopting FAIR (findable, accessible, interoperable, and reusable) principles to promote data-driven decision-making in agriculture. 4th International Conference on Agriculture, Food Security and Food Safety (AgroFood 2023), 14–15 July 2023, Colombo, Sri Lanka (online).

Nagpal, A. and **Jadhav, A.** (2023) Enhancing data governance and decision-making in agriculture through a people-first approach and FAIR (findable, accessible, interoperable, reusable) principles. International Conference on Open and FAIR Data Ecosystem Principles, Policies, and Platforms, 11–13 September 2023, New Delhi, India.

Opisa, S., Makale, F., Nyasani, J.O., Muvea, A., Kabole, M., **Chacha, D.** and **Rwomushana, I.** (2023) Prospects of classical biological control of papaya mealybug in Africa. 4th International Phytosanitary Conference & Annual Meeting of the International Pest Risk Research Group (IPRRG 2023), 18–24 September 2023, KEPHIS Headquarters, Nairobi, Kenya.

Pessina, A., Humair, L., Rasmann, S. and **Weyl, P.** (2023) Using chemical ecology to prioritize potential biological control agents for further study. North American Invasive Species Management Association (NAISMA) 31st Annual Conference, 16–19 October 2023, Lincoln, Nebraska, USA.

Rware, H., Owembabazi, L., Danielsen, S., Aliamo, C., Alokit, C. and **Kansiime, M.** (2023) Crop–livestock clinics in Uganda: a One Health approach contributing to food safety. 2nd Food Safety Conference for Africa (ACAFP), 12–14 December 2023, Accra, Ghana.

Ryan, M.J. (2023) Unravelling the conundrum – preserving the microbiome for Phytobiomes research. 15th International Congress on Culture Collections (ICCC 15), 12–16 June 2023, Braga, Portugal (invited).

Ryan, M.J. (2023) Preserving the microbiome and curating meta-data for Phytobiomes research. EMBL-EBI Industry workshop: Agri Microbiomics promise and challenges, 20–21 September 2023, Hinxton Hall, Cambridgeshire, UK (invited).

Ryan, M.J. (2023) Biofilms – can we learn from the microbiome? Biofilms Workshop, 10 October 2023, Accra, Ghana (invited).

Ryan, M.J. (2023) Cryopreservation – the challenge of preserving recalcitrant organisms and the microbiome. XIV SIRGeAC 2023 International Symposium on Genetic Resources for the Americas and the Caribbean, 13–15 December 2023, Valdivia, Chile (invited, keynote).

Schaffner, U. (2023) Classical biological control of tansy ragwort: what have we learnt about the evolutionary ecology of insect–plant interactions? Seminar, 4 June 2023, Leiden University, Netherlands.

Schaffner, U. (2023) Grassland, the ‘Cinderella’ among the world’s biomes. GIZ Seminar on One Health, 29 November 2023 (online).

Schaffner, U., Wyckhuys, K., **Jenner, E., Chaudhary, M., Kuhlmann, U., Zhang, F.** and **Li, H.** (2023) The overview of FAO–CABI NBS project – Nature-Based Solutions for One Health. Stakeholder workshop towards wider adoption of Natural-based Solutions in Greater Mekong Subregion, 13–15 June 2023, Hanoi, Vietnam.

Seehausen, M.L. (2023) *Vespa velutina* – wie gehen wir mit der kommenden Gefahr um? BLESABEE Webinar, 15 January 2023, Vienna, Austria (online presentation).

Seehausen, M.L. (2023) Neue biologische Regulation und Bekämpfungsstrategie gegen die Kirschessigfliege. Nordwestschweizer Obstbautag, 18 January 2023, Eiken, Switzerland.

- Seehausen, M.L.** (2023) Biologische Schädlingsbekämpfung der Kirschessigfliege mit einem asiatischen Nützling. 1. Hochstamm Suisse Tagung, 29 April 2023, St. Pantaleon, Switzerland.
- Seehausen, M.L.** (2023) Die asiatische Hornisse – eine Bedrohung für die Bienen und die Umwelt? Regional beekeeper meeting, 4 May 2023, Sissach, Switzerland.
- Seehausen, M.L.** (2023) Détection des nids de frelon asiatique *Vespa velutina*. Beekeeper workshop, 11 July 2023, Courtemelon, Switzerland.
- Seehausen, M.L.** (2023) Auffinden von Nestern der Asiatischen Hornisse *Vespa velutina*. Beekeeper workshop, 19 August 2023, Zurich, Switzerland.
- Seehausen, M.L.** (2023) Searching nests of the Asian hornet *Vespa velutina*. XIV. National beekeeping exhibition and conference, 16 September 2023, Banska Bystrica, Slovakia (online presentation).
- Seehausen, M.L.** (2023) Die asiatische Hornisse *Vespa velutina* – Biologie, Ökologie und Methoden zum Auffinden von Nestern. Beekeeper workshop, 30 September 2023, Hohenems, Austria.
- Seehausen, M.L.** (2023) Threats by invasive berry pests and how biological control can help. Morocco Berry Conference, 9 November 2023, Agadir, Morocco.
- Seehausen, M.L.** and **Kenis, M.** (2023) Invasion and management of *Vespa velutina* in Switzerland. Vespid Task Force COLOSS Meeting, 23–25 October 2023, Pisa, Italy (recorded presentation).
- Seehausen, M.L.** and **Kenis, M.** (2023) Update on releases of *Ganaspis brasiliensis* in Switzerland. North American Spotted Wing Drosophila Biocontrol Working Group Meeting, 28 November 2023 (online).
- Seehausen, M.L.**, Afonso, C., Branco, M. and **Kenis, M.** (2023) Risks and benefits of classical biological control of insect pests in Europe and surrounding countries. 5th meeting of the IOBC-WPRS Working Group 'Benefits and Risks of Exotic Biological Control Agents' combined with the IOBC-Global Working Group, 11–14 September 2023, Aveiro, Portugal.
- Seehausen, M.L.**, **Haye, T.** and **Kenis, M.** (2023) Classical biological control in Switzerland. Euphresco Pre-emptive Biocontrol Research Meeting: Preparedness in biological control of priority biosecurity threats, 7–8 February 2023, Zurich, Switzerland.
- Seehausen, M.L.**, **Haye, T.** and **Kenis, M.** (2023) Using parasitoids in biological control of invasive insects. Annual Meeting of the Swiss Entomological Society, 3–4 March 2023, Zurich, Switzerland.
- Seehausen, M.L.**, Park, I., Kim, S., Kim, J., Lim, E., **Deiss, F.** and **Kenis, M.** (2023) Classical biological control of the box tree moth using parasitoids from Asia. Euphresco BTM Research Meeting: Potential for using IPM tools to control or eradicate box tree moth (*Cydalima perspectalis*) incursions, 27 January 2023 (online).
- Seier, M.K.** (2023) Fungal pathogens as classical agents for weed biocontrol. EWRS WG Biological Control meeting, 13 September 2023, Aveiro, Portugal.
- Seier, M.K.**, **Djeddour, D.H.**, **Kurose, D.**, Marchante, E., Marchante, H., **Pratt, C.F.**, **Pollard, K.M.**, **Shaw, R.H.** and **Varia, S.** (2023) Benefits and risks of importation weed biological control – a European perspective. 5th meeting of the IOBC-WPRS Working Group 'Benefits and Risks of Exotic Biological Control Agents', 11–14 September 2023, Aveiro, Portugal.
- Seier, M.K.**, **Kurose, D.** and **Evans, H.C.** (2023) Evaluation of the leafspot *Mycosphaerella polygoni-cuspidati* as a potential mycoherbicide for Japanese knotweed (*Reynoutria japonica*). Mycoherbicide workshop, XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.
- Seier, M.K.**, **Pollard, K.M.**, **Kurose, D.**, **Evans, H.C.**, Gaskin, J.F., Rapini, A., Araujo, F.S., Costa, R.C., Mantovani, W., Nechet, K.L., Soares, D.J. and Barreto, R.W. (2023) Towards inaugurating classical biological weed control in Brazil: the rust *Maravalia cryptostegiae* vs. *Cryptostegia madagascariensis* s.l., the hope and the challenges. International Symposium on Biological control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Sforza, R.F.H., Cristofaro, M., Marini, F., **Pollard, K.M., Seier, M.K.** and **Weyl, P.** (2023) Do only open field tests matter? XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Shaw, R.H. (2023) Biocontrol meets traditional weed management – we have the same goal so how can we engage better? XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina (keynote speaker).

Stutz, S., McClay, A. and **Hinz, H.L.** (2023) The challenges of phenological asynchrony in host-specificity tests: case study of a biocontrol agent on common tansy, *Tanacetum vulgare*. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Szyniszewska, A. and **Taylor, B.** (2023) Data driven decision making to reduce global crop losses. 12th International Congress of Plant Pathology, 20–25 August 2023, Lyon, France.

Tambo, J.A. (2023) Pesticide risk reduction: the role of PlantwisePlus. Visions for Sustainable Agriculture Workshop, 3–5 May 2023, University of Neuchâtel, Switzerland.

Tambo, J.A. and Matimelo, M. (2023) Measuring farmer deviation from personalised extension recommendations in Zambia. African Association of Agricultural Economists Conference, 18–21 September 2023, Durban, South Africa.

Tambo, J.A., Mbugua, F., Duah, S.A., Oppong-Mensah, B., Ocloo, C.Y., and **Williams, F.** (2023) Pest risk information, agricultural outcomes and food security: evidence from Ghana. 51st Annual Conference of the Swiss Society for Agricultural Economics and Rural Sociology, 20–21 April 2023, Zurich, Switzerland.

Tambo, J.A., Mbugua, F., Duah, S.A., Oppong-Mensah, B., Ocloo, C.Y. and **Williams, F.** (2023) Pest risk information, agricultural outcomes and food security: evidence from Ghana. XVII European Association of Agricultural Economists Congress, 29 August–1 September 2023, Rennes, France.

Tarigan, S.I., Toth, Sz., Szalai, M., Turoczi, G. and **Toepfer, S.** (2023) Microbial biostimulants registered for maize with potential side-effects on its insect pests: a review. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Toepfer, S. (2023) Development of biocontrol solutions against agricultural pests. Seminar at Guangdong Institute of Zoology, Guangdong Academy of Sciences, 2 November 2023, Guangzhou, China (invited speaker).

Toepfer, S. (2023) Technology transfer for the development of biocontrol solutions against agricultural pests. Seminar at Zhongkai University of Agriculture and Engineering, 3 November 2023, Guangzhou, China.

Toepfer, S., Li, H. and Tang, R. (2023) Early detection, eradication, and containment of an invasive insect pests: the case of western corn rootworm. International Symposium for Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, China (plenary).

Toth, S., **Toepfer, S.**, Razinger, J., Primoz, Z., Modic, Sp., Ladanyi, M. and Sabotic, J. (2023) Magasabb rendu gombakbol szarmazo lektinek a kukorica rovarkartevo, *Diabrotica v. virgifera* (Coleoptera: Chrysomelidae) ellen [Higher fungi lectins proteins against the maize pest *Diabrotica v. virgifera*]. 69. Növenyvedelmi tudományos napok [69th Hungarian Plant Protection Days], 21 February 2023, Budapest, Hungary [In Hungarian].

Varia, S., Pratt, C.F. and **Wood, S.V.** (2023) Field results of Europe's first mite biocontrol agent released against the aquatic weed, *Crassula helmsii* (Saxifragales: Crassulaceae). XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Wan, M. and **Zhang, F.** (2023) CABI Plantwise/PlantwisePlus supports policy implementation of the Green Plant Protection Strategy in China. International Symposium on Experience and Development Model of Regional Agricultural Ecological Construction, 5 May 2023, Beijing, China.

Wan, M. and **Zhang, F.** (2023) '植物智慧+' 帮助合作伙伴预测、预防并准备应对植物健康问题的威胁 [PlantwisePlus helps country partners to predict, prevent and prepare for plant health threats]. PlantwisePlus Sichuan Province Stakeholder Workshop, 29 November 2023, Chengdu, China.

Waweru, B.W., Kajuga, N.J., Nyombayire, A., Mutumwinka, M., Hategekimana, A., Ndereyimana, A., Umulisa, C., Ishimwe, P.M., Bazagwira, D., Bigirimana, V.P., Mukunzi, A., Fallet, P., Turlings, T.C.J., Xun, Y. and **Toepfer, S.** (2023) Field efficacy of entomopathogenic nematodes in controlling fall armyworm in comparison to local pest management practices. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Weyl, P.S.R., Barreto, R.W., Jäger, H. and **Seier, M.** (2023) Rust fungi for the biological control of weeds in Latin America, keeping a foot in the door. Science Summit at UNGA78, 12–29 September 2023 (online).

Weyl, P.S.R., Djedjour, D.H., Hinz, H.L., Seier, M., Shaw, R.H., Smith, D. and Cabrera Walsh, G. (2023) Meeting access and benefit sharing requirements: a practical review of CABI's access to genetic resources for weed biological control. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Zhang, F. (2023) Strengthening CABI's partnership with ICC for sustainable development of the coconut sector. 59th International Coconut Community Session & Ministerial Meeting, 5–7 December 2023, Lampung, Indonesia.

Zhang, F., Costa, A., Faheem, M. and **Li, H.** (2023) An overview of CABI and its partnerships with Viet Nam. VAAS–CABI Project Office Opening Ceremony, 28 September 2023, Hanoi, Vietnam.

Zhang, F., Faheem, M., Costa, A., Alokit, C., Taylor, P., Reeder, R., Schaffner, U. and **Romney, D.** (2023) Response to Crop Health and One Health: CABI's contributions. One Health Scientific Day: Integrating Plant, Soil and Environmental Health into the One Health Strategy in Vietnam, 27 September 2023, Hanoi, Vietnam.

Zhang, F., Thanarajoo, S.S., Li, H., Faheem, M. and **Kuhlmann, U.** (2023) Uptake of natural pest control solutions through digital tools. International Symposium on Tropical Fruits (ISTF), 21–23 November 2023, Guangzhou, China.

Zhang, J., Avila, G.A. and **Zhang, F.** (2023) Biological control research of *Halyomorpha halys* in kiwifruit in China. 4th International Congress on Biological Invasions, 1–4 May 2023, Ōtautahi Christchurch, Aotearoa New Zealand.

Zhong, Y., Chen, H. and **Zhang, F.** (2023) Attraction of *Spodoptera frugiperda* to a host plant volatile compound. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Zhou, X., **Kuhlmann, U.**, Tian, F., **Li, H.** and **Zhang, F.** (2023) Joint Laboratory Annual Review 2022 & Plan 2022. 15th Joint Lab Steering Committee Meeting & 54th Annual Meeting of European Lab, 23–24 March 2023, Beijing, China.

2.7. Poster presentations at scientific meetings (34)

CABI authors are shown in **bold**, the presenting author is underlined.

Ali, M., Bai, Y., Gao, L., Luo, Z., Zhang, J. and **Zhang, F.** (2023) Assessment of field release efficacy of *Anastatus japonicus*, an egg parasitoid of brown marmorated stink bug. International Symposium on Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, Yunnan, China.

Boss, A., Toth, Sz., **Toepfer, S.**, Erb, M. and Machado, R. (2023) Engineering bacterial symbionts of entomopathogenic nematodes to enhance their biological potential against the western corn rootworm. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Boss, A., Tóth, Sz., **Toepfer, S.**, Erb, M. and Machado, R.A.R. (2023) Bacterial engineering of symbionts of entomopathogenic nematodes to enhance biological control on the western corn rootworm in maize crops. SwissPLANT symposium – Early Career Meeting 2023, 22–23 January 2023, Les Diablerets, Switzerland.

Cheng, Y., Li, H., Yang, X., Geng, L., Zhang, J., Shang, S. and **Zhang, F.** (2023) Evaluation on field efficacy of two biopesticides against fall armyworm and non-target organisms. International Symposium on Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, Yunnan, China.

Cortat, G., Sforza, R., **Toševski, I.** and **Hinz, H.L.** (2023) Ukrainian vs French chrysomelid beetles for controlling swallow worts (*Vincetoxicum* spp.) in North America: where do we stand? XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

De Clerck-Floate, R., **Toševski, I.** and Floate, K. (2023) A revisit of *Longitarsus* species (Coleoptera: Chrysomelidae) introduced or relocated in Canada for tansy ragwort biological control. Joint Annual Meeting of the Entomological Societies of Canada and Saskatchewan, 15–16 October 2023, Saskatoon, Canada.

Edgington, S., Whelan, R., Lane, S. and Barua, A. (2023) Novel biopesticide solutions for UK pests and diseases, introducing two new UKRI projects. Association of Applied Biologists Meeting 'IPM and Biocontrol 2023: Increasing collaboration across the innovation cycle', 15–16 November 2023, Derby, UK.

Häfliger, P., Stutz, S., Cloșca, C., McTavish, M., Bourchier, R. and **Weyl, P.** (2023) Advances in the rearing of two biological control agents against common reed (*Phragmites australis*). XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Humair, L., Martin G. and **Weyl, P.** (2023) Can non-native herbivores found in Switzerland provide management solutions for the invasive *Robinia pseudoacacia* in South Africa? Biology 23, 16–17 January 2023, Geneva, Switzerland.

Humair, L., Rasmann, S., Diaz, R., Harms, N. and **Weyl, P.** (2023) Biological control of parrot's feather, *Myriophyllum aquaticum* in temperate biomes. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Kajuga, N.J., Waweru, B.W., Nyombayire, A., Mutumwinka, M., Hategekimana, A., Ndereyimana, A., Umulisa, C., Ishimwe, P.M., Bazagwira, D., Bigirimana, V.P., Mukunzi, A., Fallet, P., Turlings, T.C.J., Xun, Y. and **Toepfer, S.** (2023) Minimum effective dosage of entomopathogenic nematodes at controlling fall armyworm and preventing damage under field conditions. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Kurose, D., Seier, M.K., Rajaonera, T.E., Chukwuma, E., Ntandu, J.E., Shivas, R.G. and Dhileepan, K. (2023) The smut *Cintractia kyllingae* and the rust *Uredo kyllingae-erectae*: two potential classical biological control agents for *Cyperus aromaticus* in Australia. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Kwong, R.M., **Offord, L., Pratt, C., Kurose, D.** and **Maczey, N.** (2023) Natural enemies of *Rubus anglocandicans* (Rosales: Rosaceae) target-specific surveys for the biocontrol of blackberry in Australia. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Lawson-Hale, N.L., Thomas, S.E., Wood, S.V. and **Varia, S.** (2023) The use of the rust fungus *Puccinia komarovii* var. *glanduliferae* as a classical biological control agent of Himalayan balsam in the UK. AAB Early Career Professional Skills and Science Workshop, Association of Applied Biologists, 18–19 December 2023, Leicester, UK.

Li, H., Wang, M., Zhang, W., Zhuo, F., **Lowry, A.**, Zhang, A., **Xian, X.** and **Luke, B.** (2023) Reproduction system development of *Ceracris kiangsui* Tsai and its host preference. 4th International Congress on Biological Invasions, 1–4 May 2023, Ótautahi Christchurch, Aotearoa New Zealand.

Luo, Z., Gao, L., Li, W., Chen, J., Ali, M., Zhang, F., Li, F., Wang, X. and **Zhang, J.** (2023) Assessing the lethal effects of pesticide residue exposure on beneficial parasitoids and their host, *Halyomorpha halys* (Hemiptera: Pentatomidae). International Symposium on Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, Yunnan, China.

Marini, F., Mecca, G., **Stutz, S.**, **Weyl, P.S.R.**, **Hinz, H.**, Sforza R.F.H., Vidović, B. and Cristofaro, M. (2023) Make the most of the life history traits of *Aculus taihangensis* (Acari: Eriophyidae) for its evaluation as a biological control agent of *Ailanthus altissima* (Sapindales: Simaroubaceae). XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Nagpal, A., **Jadhav, A.** and **Musker, R.** (2023) Study of the data ecosystem and data sharing constraints for enhanced data driven decision making in public policy. Public Policy Dialogues, 4–6 January 2023, Hyderabad, India.

Ncube, J., Coetze, J.A., Faltlhauser, A., Martin, G.D., Miller, B., Sosa, A. and **Weyl, P.S.R.** (2023) Collaborative efforts to manage the cryptic invader *Limnobium laevigatum* in southern African waterways. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Pratt, C., **Constantine, K.** and **Wood, S.** (2023) A century of *Azolla filiculoides* biocontrol: the economic value of *Stenopelmus rufinasus* to Great Britain. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Pratt, C., **Maczey, N.** and **Seier, M.** (2023) Classical biological control of the ice plant, *Carpobrotus edulis* (Caryophyllales: Aizoaceae). XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Purcell, M., Harms, N., Harlow, M., **Häfliger, P.**, Hong, S.-H., Zhang, J., **Stutz, S.**, Knight, I. and Lui, C. (2023) Results of international natural enemy surveys for biological control of yellow floating heart, *Nymphoides peltata* (Asterales: Menyanthaceae) in the US. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Reeve, M.A., **Kurose, D.**, **Pollard, K.M.** and **Shaw, R.H.** (2023) Rapid and inexpensive MALDI-TOF MS comparison for characterizing different populations of biological control agents and target weeds, and optimizing their matching. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Seier, M.K., **Kurose, D.**, **Pollard, K.M.**, **Evans, H.C.**, Peng, C., **Rehman, A.**, Iqbal, I.M., Shabbir, A., Jäger, H., Sevilla, C. and **Ellison, C.A.** (2023) A good match is hard to find – the case of classical biological control of *R. niveus* in Galápagos. XVI International Symposium on Biological control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Tarigan, S.I., Toth, Sz., Turoczi, G. and **Toepfer, S.** (2023) Evaluating dose-responses of commercial insecticides against *Diabrotica v. virgifera* (Coleoptera: Chrysomelidae) for selecting proper positive controls in laboratory bioassays. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Thomas, S.E., **Seier, M.K.** and den Breeyen, A. (2023) Biocontrol of old man's beard, *Clematis vitalba* (Ranunculales: Ranunculaceae): fungi re-visited. XVI International Symposium on Biological control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Tilling, A.E., **Kurose, D.**, **Pratt, C.** and **Varia, S.** (2023) Molecular characterisation of populations of the invasive *Myriophyllum aquaticum* across the UK in the context of ongoing research into a suitable classical biological control agent. AAB Early Career Professional Skills and Science Workshop, Association of Applied Biologists, 18–19 December 2023, Leicester, UK.

Toepfer, S., Toth, S., Zupan, T., Bogataj, U., Žnidaršič, N., Ladanyi, M., Peternel, T. and **Sabotič, J.** (2023) *Diabrotica v. virgifera* resists the effects of entomotoxic fungal protease inhibitors in food. European Biotechnology Congress, 4–6 October 2023, Ljubljana, Slovenia.

Toepfer, S., Vandenbossche, B., Fallet, P., Turlings, T.C.J., Yan, X., Waweru, B.W. and Kajuga, N.J. (2023) Application techniques for entomopathogenic nematodes against below- and above ground maize pests. 28th International Working Group of *Ostrinia* and other maize pests (IWGO) Conference, 2–4 May 2023, Nairobi, Kenya.

Toepfer, S., Vandenbossche, B., Fallet, P., Turlings, T.C.J., Yan, X., Waweru, B.W., Kajuga, N.J. and Tang, R. (2023) Application techniques for entomopathogenic nematodes against below- and above ground maize pests. ABIM/IMBA meeting, 23–25 October 2023, Basel, Switzerland.

Varia, S., Thomas, S.E., Wood, S.V. and Pollard, K.M. (2023) Taking biological control to our communities – use of a rust fungus for the control of *Impatiens glandulifera* (Ericales: Balsaminaceae) in Great Britain. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Wang, M., Cheng, Y., Li, H., Zhuo, F., Wang, G., Zhang, A. and **Luke, B.** (2023) Evaluation of the crop preference and reproduction system development of *Ceracris kiangsu* Tsai. International Symposium on Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, Yunnan, China.

Wood, S.V., Djeddour, D.H., Pratt, C.F., Tilling, A.E. and Berman, C. (2023) A weevil's first year in the UK – a promising start for *Listronotus elongatus* (Coleoptera: Curculionidae), a biocontrol agent for *Hydrocotyle ranunculoides*. XVI International Symposium on Biological Control of Weeds, 7–12 May 2023, Puerto Iguazú, Misiones, Argentina.

Zhang, J., Chen, J., Avila, G., **Guo, L., Mi, Q.,** Li, D. and **Zhang, F.** (2023) Field cage assessment of feeding damage by *Halyomorpha halys* on kiwifruit orchards in China. International Symposium on Plant Biosafety (ISPB), 29 October–1 November 2023, Kunming, Yunnan, China.



3. Other outputs

3.1. Support for introduction of classical biological control agents

For many years, CABI has been known for its work supporting national agencies to implement classical biological control programmes against insect and weed pests. Here we list those classical biological control agents for which applications to release have been made, or which have been released, in 2023, based on CABI's research and technical support.

Biological control agent studied	Target weed/insect pest	Status end 2023	Released in 2023	Country of release or intended release
<i>Aceria angustifoliae</i> (Eriophyidae)	<i>Elaeagnus angustifolia</i> (Russian olive)	USDA Technical Advisory Group (TAG) recommended release in 2022, but release permit has not yet been granted	No	USA
<i>Aceria angustifoliae</i> (Eriophyidae)	<i>Elaeagnus angustifolia</i> (Russian olive)	Field releases made in British Columbia and Alberta	Yes	Canada
<i>Acerophagus papaya</i> (Encyrtidae)	<i>Paracoccus marginatus</i> (papaya mealybug)	Application to release in Uganda and South Sudan	No	Uganda and South Sudan
<i>Acerophagus papaya</i> (Encyrtidae)	<i>Paracoccus marginatus</i> (papaya mealybug)	Releases made in Kenya	Yes	Kenya
<i>Aculus crassulae</i> (Eriophyidae)	<i>Crassula helmsii</i> (Australian swamp stonecrop)	Field releases made across England and Wales	Yes	UK
<i>Aphalara itadori</i> (Aphalaridae)	<i>Fallopia japonica</i> (Japanese knotweed) / <i>F. × bohemica</i> (bohemian knotweed)	Field release made in Canada, UK and USA	Yes	Canada, Netherlands, UK and USA
<i>Bagous nodulosus</i> (Curculionidae)	<i>Butomus umbellatus</i> (flowering rush)	In 2022, USDA Technical Advisory Group (TAG) recommended release. Permission for release granted by CFIA, Canada	No	Canada and USA
<i>Dichrorampha aeratana</i> (Tortricidae)	<i>Leucanthemum vulgare</i> (oxeye daisy)	Field releases made in British Columbia and Alberta	Yes	Canada
<i>Dichrorampha aeratana</i> (Tortricidae)	<i>Leucanthemum vulgare</i> (oxeye daisy)	USDA Technical Advisory Group (TAG) recommended release in 2022, but release permit has not yet been granted	No	USA
<i>Ganaspis cf. brasiliensis</i> G1 (Fititidae)	<i>Drosophila suzukii</i> (spotted wing drosophila)	Field releases done by CABI in the cantons Jura and Ticino, Switzerland	Yes	Switzerland
<i>Listronotus elongatus</i> (Curculionidae)	<i>Hydrocotyle ranunculoides</i> (floating pennywort)	Field releases made across the UK	Yes	UK
<i>Listronotus setosipennis</i> (Curculionidae)	<i>Parthenium hysterophorus</i> (parthenium weed)	Field releases made in provinces of Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan and state of Azad Jammu and Kashmir	Yes	Pakistan
<i>Microterys nietneri</i> (Encyrtidae)	<i>Coccus hesperidum</i> (brown soft scale)	Field releases made on Nightingale Island, Tristan da Cunha and Inaccessible Island	Yes	Tristan da Cunha (UK Overseas Territory)

Biological control agent studied	Target weed/insect pest	Status end 2023	Released in 2023	Country of release or intended release
<i>Mogulones borraginis</i> (Curculionidae)	<i>Cynoglossum officinale</i> (houndstongue)	In 2021 USDA Technical Advisory Group (TAG) recommended release	No	USA
<i>Nephus reunionii</i> (Coccinellidae)	<i>Coccus hesperidum</i> (brown soft scale)	Field releases made on Nightingale Island, and Inaccessible Island	Yes	Tristan da Cunha (UK Overseas Territory)
<i>Puccinia komarovii</i> var. <i>glanduliferae</i> (Pucciniaceae)	<i>Impatiens glandulifera</i> (Himalayan balsam)	Field releases made across England, Scotland and Wales	Yes	UK
<i>Puccinia lantanae</i> (Pucciniaceae)	<i>Lantana camara</i> (lantana)	Rust undergoing biotype testing in containment facility	Yes	South Africa

3.2. Extension material

CABI staff contributed to 41 new or updated extension materials in the PlantwisePlus Knowledge Bank in 2023. This included PlantwisePlus Factsheets for Farmers, Pest Management Decision Guides and posters, all which can be seen [here](#).

Flood, J. (2023) *Fusarium xylarioides* (coffee wilt). *CABI Compendium datasheet*. CAB International, Wallingford, UK. <https://doi.org/10.1079/cabicompendium.25166>

3.3. Distribution maps of plant pests/diseases

In 2023, nine *Distribution Maps of Plant Pests* were issued and 18 *Distribution Maps of Plant Diseases*. The distribution maps of plant pests can be found [here](#) in the CABI Digital Library and the distribution maps of plant diseases [here](#).

3.4. CABI Bioscience identification service and Genetic Resources Collection

During 2023, the CABI Bioscience Microbial Identification Service processed more than 1100 sequences and issued 51 identification reports on 140 microbial samples. Of these, 42 were for Member Countries other than the UK, with 33 strains for Nigeria, nine for Kenya, three for India, ten for Mauritius and >90 for St Helena (including for projects). The Service also provided 460 identifications for CABI projects, of which 98 were for the Darwin Tree of Life (DToL) Project, 123 were for the CABI Culture Collection (GRC), and 126 were for the CABI Diagnostics and Advisory Service (DAS) and PlantwisePlus, of which 104 were insect identifications. The service also facilitated the processing of >300 sequences by CABI scientists in the UK working on invasive species management projects.

The GRC sent out 109 cultures in response to 143 enquiries from external organizations during 2023. Thirty-three of these originated from eight Member Countries (the UK, Australia, India, Netherlands, Nigeria, Papua New Guinea, South Africa and Sri Lanka), 28 of which were sent to two Member Countries (the UK and Malaysia). Forty-eight strains that originated from non-Member Countries were sent to two Member Countries (the UK and Malaysia).

GRC staff also preserved 207 cultures, 156 of which were cultures from Member Countries (Australia, Bangladesh, Canada, Colombia, Côte d'Ivoire, Ethiopia, Guyana, India, Jamaica, Kenya, Malawi, Mauritius, Netherlands, Nigeria, Pakistan, Papua New Guinea, Philippines, Saint Helena, South Africa, Sri Lanka, Switzerland, Tanzania, Uganda, the UK, Zambia and Zimbabwe).

In addition to the above, a total of 4800 samples of UK crop microbiomes have been cryopreserved as part of the CryoBank Project.

4. CABI staff, students and associates

4.1. Scientific staff

Location	Family name	First name	Highest degree
Austria	Valverde	Alvaro	MSc
Brazil	Colmenarez	Yelitza	PhD
Brazil	Corniani	Natália	PhD
China	Li	Hong-Mei	PhD
China	Wan	Min	PhD
China	Zhang	Feng	PhD
China	Zhang	Jin-Ping	PhD
Ethiopia	Gurmessa	Negussie	PhD
Ghana	Agboyi	Lakpo	PhD
Ghana	Boafo	Hettie Arwoh	PhD
Ghana	Clottey	Victor	PhD
Ghana	Duah	Solomon Agyeman	MA
Ghana	Hevi	Walter	MPhil
Ghana	Oppong-Mensah	Birgitta	MSc
Hungary	Toepfer	Stefan	DnatSc
India	Chaudhary	Malvika	PhD
India	Handiganala Munireddappa	Mahesh	PhD
India	Jadhav	Arun	BTech
India	Khanna	Kritika	MA
India	Manjari	Madhu	MBA
India	Nagpal	Akanksha	MTech
India	Pandit	Vinod	PhD
India	Rajendran	Ganeshamoorthy	MBA
India	Ramasamy	Gopi	MPhil
India	Thakur	Manju	PhD
Kenya	Akiri	Morris	PhD
Kenya	Bitange	Naphis	PhD
Kenya	Bundi	Mary	MSc
Kenya	Chacha	Duncan	BSc
Kenya	Chege	Florence	MSc
Kenya	Gatere	Lydia	PhD
Kenya	Kansiime	Monica	PhD
Kenya	Karanja	Daniel	PhD
Kenya	Karanja	Joseph	BSc
Kenya	Karanja	Lucy	MSc
Kenya	Khonje	Makaiko	PhD
Kenya	Kouko	Edith	MSc
Kenya	Magata	Ezra	BSc
Kenya	Magero	Deogratius	BSc

Location	Family name	First name	Highest degree
Kenya	Makale	Fernadis	MSc
Kenya	Mbugua	Fredrick	MSc
Kenya	Mibei	Henry	MSc
Kenya	Migiro	Lorna	PhD
Kenya	Miller	Selpha	PhD
Kenya	Mudumba	Tutilo	PhD
Kenya	Mugambi	Idah	MSc
Kenya	Mulema	Joseph	PhD
Kenya	Mutuku	Benson	PhD
Kenya	Njenga	Maureen	BSc
Kenya	Nunda	Winnie	BSc
Kenya	Ochieng	Violet	MSc
Kenya	Ochilo	Willis	PhD
Kenya	Odunga	Stacey	MSc
Kenya	Onkendi	Edward	PhD
Kenya	Onyango	David	MSc
Kenya	Oronje	MaryLucy	PhD
Kenya	Otieno	Washington	PhD
Kenya	Rangi	Dennis	PhD
Kenya	Romney	Dannie	PhD
Kenya	Rugaita	Geoffrey	BSc
Kenya	Rware	Harrison	MSc
Kenya	Rwomushana	Ivan	PhD
Kenya	Williams	Frances	MSc
Malaysia	Alaganthiran	Jayanthi	MSc
Malaysia	Chan	Fook Wing	BSc
Malaysia	Costa	Arnaud	PhD
Malaysia	Faheem	Muhammad	PhD
Malaysia	Suntharalingam	Chubashini	PhD
Malaysia	Thanarajoo	Sathis Sri	PhD
Netherlands	Boerefijn – van Schaaijk	Lieke	MSc
Netherlands	Danielsen	Solveig	PhD
Netherlands	Vos	Janny	PhD
Pakistan	Ahmed	Shakeel	PhD
Pakistan	Ali	Kazim	PhD
Pakistan	Ali	Mushtaque	MSc
Pakistan	Ali	Sajjad	MSc
Pakistan	Asad	Habat Ullah	PhD
Pakistan	Asif	Muhammad	MSc
Pakistan	Aslam	Naeem	PhD
Pakistan	Bajwa	Babar Ehsan	PhD
Pakistan	Danish	Muhammad	MSc

Location	Family name	First name	Highest degree
Pakistan	Faisal	Shah	MSc
Pakistan	Farooq	Muzammil	PhD
Pakistan	Honey	Sabyan Faris	PhD
Pakistan	Imran	Muhammad	MSc
Pakistan	Ishaq	Waseem	MSc
Pakistan	Mangi	Sanaullah	MSc
Pakistan	Naqvi	Azeem Hayder	MSc
Pakistan	Rasheed	Abdul	MSc
Pakistan	Rehman	Abdul	MSc
Pakistan	Rehman	Hafiz Mahmood	PhD
Pakistan	Riaz	Rehan	PhD
Pakistan	Safdar	Umair	PhD
Pakistan	Saif	Ali	PhD
Pakistan	Saleem	Yasir	MSc
Pakistan	Ullah	Fazl	MSc
Pakistan	Umer	Abeera	MSc
Pakistan	Zada	Naeem	MSc
South Africa	Witt	Arne	PhD
Switzerland	Babendreier	Dirk	DnatSc
Switzerland	Bateman	Melanie	PhD
Switzerland	Bell	Caroline	PhD
Switzerland	Cortat	Ghislaine	MSc
Switzerland	Eschen	René	DnatSc
Switzerland	Grossrieder	Manfred	MSc
Switzerland	Häfliger	Patrick	DnatSc
Switzerland	Haye	Tim	DnatSc
Switzerland	Hinz	Hariet	DnatSc
Switzerland	Holmes	Keith	PhD
Switzerland	Humair	Lauréline	MSc
Switzerland	Jenner	Emma	PhD
Switzerland	Jenner	Wade	PhD
Switzerland	Kenis	Marc	DnatSc
Switzerland	Kuhlmann	Ulrich	DnatSc
Switzerland	Malek	Robert	PhD
Switzerland	Nacambo	Saidou	MSc
Switzerland	Postec	Rachel	MSc
Switzerland	Schaffner	Urs	DnatSc
Switzerland	Seehausen	Lukas	PhD
Switzerland	Stutz	Sonja	DnatSc
Switzerland	Tambo	Justice	PhD
Switzerland	Weyl	Philip	PhD
Switzerland	Wood	Anna	PhD

Location	Family name	First name	Highest degree
Trinidad and Tobago	Ramnanan	Naitram	MPhil
Uganda	Alokit	Christine	MSc
Uganda	Owembabazi	Lilian	MSc
UK	Day	Roger	PhD
UK (Egham)	Ahmed	Fahad	MSc
UK (Egham)	Ananda	Amrutha	MSc
UK (Egham)	Berman	Chris	MSc
UK (Egham)	Bonnin	Miguel	BSc
UK (Egham)	Buddie	Alan	PhD
UK (Egham)	Caine	Thelma	
UK (Egham)	Cobb	Emma	MSc
UK (Egham)	Constantine	Kate	MSc
UK (Egham)	Crozier	Jayne	PhD
UK (Egham)	Djeddour	Djami	MSc
UK (Egham)	Edgington	Steve	PhD
UK (Egham)	Flood	Julie	PhD
UK (Egham)	Gerrard	William	BSc
UK (Egham)	Hudson	Ken	MSc
UK (Egham)	Ineson	Judith	MSc
UK (Egham)	Ishii-Adajar	Hideo	MSc
UK (Egham)	Kadzamira	Mariam	PhD
UK (Egham)	Kermode	Anthony	BSc
UK (Egham)	Kurose	Daisuke	PhD
UK (Egham)	Lamontagne-Godwin	Julien	PhD
UK (Egham)	Lawson-Hale	Natasha	BSc
UK (Egham)	Luke	Belinda	PhD
UK (Egham)	Maczey	Norbert	PhD
UK (Egham)	Minter	David	PhD
UK (Egham)	Morris	Maisie	BSc
UK (Egham)	Offord	Lisa	BSc
UK (Egham)	Pollard	Kate	MRes
UK (Egham)	Pratt	Corin	MSc
UK (Egham)	Reeder	Rob	PhD
UK (Egham)	Reeve	Mike	PhD
UK (Egham)	Ryan	Matthew	PhD
UK (Egham)	Seier	Marion	PhD
UK (Egham)	Shaw	Richard	PhD
UK (Egham)	Smith	Vince	BSc
UK (Egham)	Stewart	Helen	BSc
UK (Egham)	Tapper	Niamh	MSc
UK (Egham)	Taylor	Phil	PhD
UK (Egham)	Thomas	Sarah	PhD

Location	Family name	First name	Highest degree
UK (Egham)	Tilling	Anna	BSc
UK (Egham)	Varia	Sonal	PhD
UK (Egham)	Whelan	Rhian	BSc
UK (Egham)	White	Gretel	PhD
UK (Egham)	Wood	Suzy	BSc
UK (Egham)	Yeap	Yuen Ting	MSc
UK (HQ/Egham)	Abegunrin	Gideon	MSc
UK (HQ/Egham)	Allan	Melissa	MSc
UK (HQ/Egham)	Arasah	Rasaki	MSc
UK (HQ/Egham)	Beale	Tim	BSc
UK (HQ/Egham)	Beddie-Memberr	Boma	MSc
UK (HQ/Egham)	Beeken	Joe	MSc
UK (HQ/Egham)	Bodevin	Pascale	MSc
UK (HQ/Egham)	Cameron	Katherine	MSc
UK (HQ/Egham)	Chaloner	Thomas	PhD
UK (HQ/Egham)	Curry	Claire	MSc
UK (HQ/Egham)	Day	Charlotte	MSc
UK (HQ/Egham)	Finegold	Cambria	MSc
UK (HQ/Egham)	Holland	William	MSc
UK (HQ/Egham)	Isaac	Adaugo	MSc
UK (HQ/Egham)	King	Elizabeth	MSc
UK (HQ/Egham)	Lavender	Edward	PhD
UK (HQ/Egham)	Lowry	Alyssa	MSc
UK (HQ/Egham)	Mahmood	Salar	PhD
UK (HQ/Egham)	Msengezi	Chipo	MSc
UK (HQ/Egham)	Oliver	Gaby	MSc
UK (HQ/Egham)	Page	Anna	PhD
UK (HQ/Egham)	Parr	Martin	PhD
UK (HQ/Egham)	Sanchez Presa	Libertad	PhD
UK (HQ/Egham)	Szyniszewska	Anna	PhD
UK (HQ/Egham)	Taylor	Bryony	PhD
UK (HQ)	Allen	Uma	MSc
UK (HQ)	Antonian	Clara	BSc
UK (HQ)	Berthelemy	Mark	BSc
UK (HQ)	Bird	Damian	BSc
UK (HQ)	Bishop	James	BSc
UK (HQ)	Broom	Fiona	MSc
UK (HQ)	Campaign	Alice	MSc
UK (HQ)	Charles	Lucinda	BSc
UK (HQ)	Cole	Steph	BSc
UK (HQ)	Cooper	Ward	BSc
UK (HQ)	Cullum	James	MSc

Location	Family name	First name	Highest degree
UK (HQ)	Davis	Tamsin	BSc
UK (HQ)	Dicks	Gareth	MSc
UK (HQ)	Elger	Daniel	PhD
UK (HQ)	Ezeomah	Bookie	PhD
UK (HQ)	Fielder	Hannah	PhD
UK (HQ)	Grell	Georgina	PhD
UK (HQ)	Head	Tracy	BSc
UK (HQ)	Hemming	David	PhD
UK (HQ)	Holt	Alistair	BSc
UK (HQ)	Makepeace	Caroline	BSc
UK (HQ)	Mcgillivray	Lesley	PhD
UK (HQ)	Neave	Suz	MSc
UK (HQ)	Newton	Erika	PhD
UK (HQ)	O'Brien	Tim	BSc
UK (HQ)	Palmer	Mark	MSc
UK (HQ)	Parfitt	Claire	BSc
UK (HQ)	Rendell-Dunn	Alexis	BSc
UK (HQ)	Richards	Gareth	PhD
UK (HQ)	Robinson	Andy	PhD
UK (HQ)	Stubbs	Rebecca	MSc
UK (HQ)	Swarbrick	Phil	PhD
UK (HQ)	Thay	Jess	BSc
UK (HQ)	Weeks	Lalitha	MSc
UK (HQ)	Wilford	Shankari	BSc
UK (HQ)	Willsher	Neil	MBa
UK (HQ)	Wood	Rachel	BSc
UK (HQ)	Zhang	Qiaoqiao	PhD
Zambia	Durocher-Granger	Léna	MSc
Zambia	Kasoma	Chapwa	PhD
Zambia	Phiri	Noah	PhD
Zambia	Phiri	Sydney	PhD
Zambia	Shimbwambwa	Dora	BSc

4.2. CABI staff working towards a research degree

Location	Name of staff member	Degree for which registered	University	CABI supervisor(s)
Ghana	Hevi, Walter	PhD	Kwame Nkrumah University of Science and Technology, Ghana	–
Ghana	Oppong-Mensah, Birgitta	PhD	University for Development Studies, Ghana	–
Kenya	Chacha, Duncan	MSc	University of Nairobi, Kenya	–
Kenya	Karanja, Lucy	PhD	University of Nairobi, Kenya	–
Kenya	Makale, Fernadis	PhD	University of Nairobi, Kenya	–
Kenya	Nunda, Winnie	MSc	University of Nairobi, Kenya	–
Netherlands	Durocher-Granger, Léna	PhD	Wageningen University, Netherlands	Marc Kenis
Pakistan	Fazlullah	PhD	University of Haripur, Pakistan	–
Pakistan	Khan, Yasir Saleem	PhD	Sindh Agriculture University, Pakistan	–
Switzerland	Humair, Lauréline	PhD	University of Neuchâtel, Switzerland	Philip Weyl
UK	Adaugo, Isaac	PhD	Leicester Castle Business School, De Montfort University, Leicester, UK	Martin Parr
UK	Bonnin, Miguel	PhD	Imperial College London, UK	Matthew Ryan
UK	Constantine, Kate	PhD	Royal Holloway, University of London, UK	Frances Williams
UK	Pollard, Kate	PhD	Royal Holloway, University of London, UK	Marion Seier

4.3. Research students

Location	Name of student	Degree to which attachment will contribute	University of student	CABI supervisor(s)
China	Ali, Muhammad Yasir	PhD	Graduate School of Chinese Academy of Agricultural Sciences (CAAS), China	Zhang Feng, Zhang Jin-Ping
China	Bai, Yi-Na	MSc	Jilin Agricultural University, China	Zhang Jin-Ping
China	Bukero, Abdul Azizi	PhD	Graduate School of Chinese Academy of Agricultural Sciences (CAAS), China	Zhang Feng, Li Hong-Mei
China	Cheng, Yuan-yuan	MSc	Gansu Agricultural University, China	Li Hong-Mei
China	Gao, Li-Ping	MSc	Changjiang University, China	Zhang Jin-Ping
China	Liu, Tian-Jie	PhD	Jilin Agricultural University, China	Zhang Jin-Ping
China	Luo, Zheng-Yu	MSc	Changjiang University, China	Zhang Jin-Ping
China	Qian, Ying-jun	MSc	Changjiang University, China	Li Hong-Mei
China	Song, Zi-Jian	MSc	Jilin Agricultural University, China	Zhang Jin-Ping
China	Tian, Xin-Yue	MSc	Jilin Agriculture University, China	Zhang Jin-Ping
China	Wang, Mei-Zhi	MSc	Beijing University of Agriculture, China	Li Hong-Mei
Hungary	Iványi, Dora	PhD	Hungarian University of Agriculture and Life Sciences (MATE), Hungary	Stefan Toepfer
Hungary	Tarigan, Sri Ita	PhD	MATE, Hungary, and Universitas Kristen Wira Wacana Sumba, Indonesia	Stefan Toepfer
Hungary	Toth, Szabolcs	PhD	MATE, Hungary	Stefan Toepfer

Location	Name of student	Degree to which attachment will contribute	University of student	CABI supervisor(s)
Kenya	Chepng'eno, Mercy	MSc	University of Nairobi, Kenya	Joseph Mulema
Kenya	Chirchir, Jackline	MSc	Kenyatta University, Kenya	MaryLucy Oronje
Kenya	Kamau, Jane Wanjiku	PhD	University of Nairobi, Kenya	Joseph Mulema
Kenya	Karanja, Lucy Wangari	PhD	University of Nairobi, Kenya	Joseph Mulema
Kenya	Kinusa, Laurent Nyambu	MSc	School of Agriculture and Enterprise Development, Kenyatta University	Joseph Mulema
Kenya	Mellon, Florence Kabole	PhD	University of Nairobi, Kenya	Ivan Rwmushana
Switzerland	Boss, Anja	PhD	University of Berne and University of Neuchâtel, Switzerland	Stefan Toepfer
Switzerland	Michels, Olivia	MSc	HAFL, Switzerland	Lukas Seehausen
Switzerland	Pessina, Alice	MSc	University of Neuchâtel, Switzerland	Philip Weyl
UK	Bouvier, Jacques	PhD	University of Oxford, UK	Anna Szyniszewska
UK	Chen, Bingquing	MSc	Imperial College London, UK	Anna Szyniszewska
UK	Chen, Minlan	MSc	Imperial College London, UK	Anna Szyniszewska
UK	Davis, Tamsin	MSc	University of Reading, UK	–
UK	Dobson, George	PhD	University of Oxford, UK	Anna Szyniszewska
UK	Humbeeck, Theo	MSc	Royal Holloway, University of London, UK	Varia Sonal, Kate Pollard, Bryony Taylor
UK	Kopera, Anita	PhD	University of Reading, UK	Steve Edgington, Jayne Crozier
UK	Pavlou, Jan	PhD	University of Warwick, UK	Anna Szyniszewska
UK	Peck, Lily	PhD	Imperial College London, UK	Matthew Ryan
UK	Prayoonrat, Pasith	MSc	Imperial College London, UK	Anna Szyniszewska
UK	Spence, Ellie	PhD	University of Warwick, UK	Steve Edgington
UK	Williams, Tamsin	PhD	Royal Holloway, University of London, UK	Steve Edgington
UK	Webster, Amy	PhD	University of Birmingham, UK	Norbert Maczey, Phil Taylor

4.4. Certificates and Diploma of Advanced Studies in Integrated Crop Management

The postgraduate degree programme of Advanced Studies in Integrated Crop Management (ICM) started in 2015 as a collaboration between CABI's centre in Switzerland, the University of Neuchâtel, and the Canton Jura. Scientists, teachers, agricultural advisors and policy makers took part in the 9-month study programme to enrich their knowledge about the importance of ICM and how to support its adoption as a long-term strategy to address global challenges. During the first years of the programme (2015–2020), students followed a Master of Advanced Studies in ICM (MAS-ICM) course in Switzerland; however, due to COVID-19 and a general desire to make the course available to a larger number of participants globally, the MAS-ICM content was adapted to a digital learning format.

Three Certificate of Advanced Studies in ICM (CAS-ICM) courses are now being offered by CABI and the University of Neuchâtel. These fully online courses run independently of one another but can be combined into a Diploma of Advanced Studies in ICM (DAS-ICM). Between January 2022 and June 2023, a total of 62 participants from 24 countries across Africa, Asia and the Americas took part in CAS 1 – Sustainable Production Practices, CAS 2 – Aspects of Implementation and CAS 3 – Biological Control and Ecosystem Services. Completion rates were 64%, 48% and 64%, respectively. All three courses are currently running simultaneously with new cohorts of international students from September 2023 to June 2024 with 24, 18 and 20 participants for CAS 1, CAS 2 and CAS 3, respectively.

4.5. CABI Associates

Location	Name	Highest qualification	Role
Afghanistan	Faizi, Zakariya	MSc	CABI Associate, Afghanistan
Bangladesh	Ahmad, Md. Saleh	PhD	CABI Associate, Bangladesh
Bangladesh	Bhattacharjee, Atanu	MSc	CABI Associate, Bangladesh
Bangladesh	Sonom, Homaira	MSc	CABI Associate, Bangladesh
Bolivia	Florido, Miguel	MSc	CABI Associate, Bolivia
Bolivia	Sainz, Claudia	MSc	CABI Associate, Bolivia
Costa Rica	Delgado, Juan Vicente O.	BSc	CABI Associate, Costa Rica
Ecuador	Vásquez, Carlos	PhD	CABI Associate, LAC
Ghana	Beseh, Patrick	MSc	CABI Associate, Ghana
India	Srinivas, Kavitha	MSc	CABI Associate, India
Kenya	Agwanda, Charles	PhD	CABI Associate, Kenya
Malaysia	Annamalai, Sivapragasam	PhD	CABI Associate, Malaysia
Malaysia	Loke, Wai Hong	PhD	CABI Associate, Malaysia
Malaysia	Soetikno, Sastroutomo S.	PhD	CABI Associate, Malaysia
Nicaragua	Medina, Luis	MSc	CABI Associate, Nicaragua
Philippines	Joshi, Ravindra	PhD	CABI Associate, Malaysia
Switzerland	Gassmann, André	DnatSc	CABI Associate, Switzerland
Switzerland	Tosevski, Ivo	PhD	CABI Associate, Switzerland
UK	Cock, Matthew	PhD	Emeritus Fellow
UK	Evans, Harry C.	DSc	Emeritus Fellow
UK	Flood, Julie	PhD	Emeritus Fellow (from August)
UK	Gonzalez-Moreno, Pablo	PhD	CABI Associate, UK
UK	Hunt, David	PhD	Emeritus Fellow
UK	Murphy, Sean T.	PhD	CABI Research Fellow

Location	Name	Highest qualification	Role
UK	Rutherford, Mike	PhD	CABI Associate, UK
UK	Smith, David	PhD	Emeritus Fellow
UK	Stewart, Janet	BSc	CABI Associate, UK
Vietnam	Dao, Thi Hang	PhD	CABI Associate, Malaysia
Vietnam	Nguyen, Thi Kim Ngan	MSc	CABI Associate, Malaysia

4.6. Visiting scientists

Location	Name	Highest degree	Home institute	Dates (2023)
Switzerland	Qin Deqiang	PhD	Department of Plant Protection, Yunnan Agricultural University, China	October–December
Switzerland	Naderi, Ruhollah	PhD	University of Shiraz, Iran	July–December
UK (Egham)	Brown, Bob	PhD	Landcare Research, New Zealand	August–October
UK (Egham)	Tryono, Reno	PhD	PT Smart, Indonesia	July–August
UK (Egham)	Vasques, Diego Tavares	PhD	University of Tokyo, Japan	August

4.7. Technical support

Centre	Name	Qualification
China	Chen, Xin	MSc
China	Yuan, Bo	MSc
Kenya	Karanja, Peter	HNDip
Kenya	Munyasia, Dickson	BT
India	Sharma, Neeraj	MBA
India	Varkey, Roy	MCA, PG in Management
Malaysia	Baki, Haji Razali	Technician
Pakistan	Ahmed, Ejaz	Matric
Pakistan	Ali, Saqib	Graduate
Pakistan	Anjum, Daud Hussain	Matric
Pakistan	Rasheed, Khalid	Intermediate
Switzerland	Cloşca, Cornelia	MSc
Switzerland	Donzé, Quentin	DiplGard
Switzerland	Willemin, Florence	DiplGard
UK (Egham)	Adamin, Tomasz	
UK (Egham)	Webb, Icel	BA
Zambia	Kanyumbu, Naomi	BSc
Zambia	Nakombe, Sihle	BSc

4.8. Temporary research students/interns

Location	Name	Highest degree	University	Dates (2023)
Brazil	Johansson, Malin	MSc	Gothenburg University, Sweden	January–May
China	Dai, Ke	BSc	Jining Normal University, China	July–December
China	Sun, Jin-Hui	BSc	Jining Normal University, China	January–July
Pakistan	Abbas, Summar	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Aleem, Zain	BSc	University of Agriculture, Faisalabad, Pakistan	March–June
Pakistan	Arshad, Zunaira	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Bibi, Aiza	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Bunny, Saboor Muarrij	MSc	Punjab University, Lahore, Pakistan	August–December
Pakistan	Hussain, Arif	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Kausar, Shehnaz	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Malik, Ayesha	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Qanita, Syeda	BSc	COMSATS, Islamabad, Pakistan	July–August
Pakistan	Rahim, Mohammad Bin Abdul	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Rasool, Adnan	BSc	University of Agriculture, Faisalabad, Pakistan	March–June
Pakistan	Saleem, Muhammad Shahab	BSc	Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan	March–June
Pakistan	Tahir, Muhammad Zunair	BSc	University of Agriculture, Faisalabad, Pakistan	March–June
Pakistan	Zafar, Muqadas	BSc	University of Agriculture, Faisalabad, Pakistan	March–June
Switzerland	Arriaran, Elsa	BSc	University of Szeged, Hungary	May–July
Switzerland	Cantarelli, Marco	MSc	Vrije Universiteit, Belgium	April–September
Switzerland	Capko, Clarissa	BSc	University of the Fraser Valley, Canada	May–August
Switzerland	Furtado, Kathleen	BSc	Simon Fraser University, Canada	April–June
Switzerland	Kostyniuk, Laura	BSc	University of Ottawa, Canada	April–July
Switzerland	McQueen, Loughlin	BSc	University of British Columbia, Canada	May–August
Switzerland	Pessina, Alice	MSc	University of Neuchâtel, Switzerland	March–September
Switzerland	Pezzulli, Sara	MSc	University of Turin, Italy	April–September
UK (Egham)	Bonsuuri, Mabel	MSc	University of Reading, UK	February–July
UK (Egham)	Forbes, Polly	BSc	University of Sheffield, UK	June–December
UK (Egham)	Peel, Ed	BA	University of Hull, UK	June–December
UK (Egham)	Sato, Yota	MSc	Chiba University, Japan	August



Contact CABI

AFRICA

Ghana

CABI, CSIR Campus
No. 6 Agostino Neto Road
Airport Residential Area
P. O. Box CT 8630,
Cantonments
Accra, Ghana

T: +233 (0)302 797 202
E: westafrica@cabi.org

Kenya

CABI, Canary Bird
673 Limuru Road, Muthaiga
PO Box 633-00621
Nairobi, Kenya

T: +254 (0)20 2271000/ 20
E: africa@cabi.org

Zambia

CABI, Southern Africa Centre
5834 Mwange Close
Kalundu
P.O. Box 37589
Lusaka, Zambia

T: +260 967 619 665
E: southernafrica@cabi.org

AMERICAS

Brazil

CABI, UNESP-Fazenda
Experimental Lageado, FEPAF
(Escriptorio da CABI)
Rua Dr. Jose Barbosa
de Barros 1780 Fazenda
Experimental Lageado
CEP:18.610-307
Botucatu, São Paulo, Brazil

T: +55 (14) 3880 7670
E: y.colmenarez@cabi.org

Trinidad & Tobago

CABI, 59 Gordon Street
Curepe, St. Augustine
Tunapuna 331323
Trinidad and Tobago

T: +1 868 6457628
E: n.ramnanan@cabi.org

USA

CABI, 7200 Portland Street
Boston, MA 02114, USA

T: +1 (617) 682-9015
E: h.jansen@cabi.org

ASIA

China

CABI, Beijing
Representative Office
Internal Post Box 85
Chinese Academy of
Agricultural Sciences
12 Zhongguancun Nandajie
Beijing 100081, China

T: +86 (0)10 82105692
E: china@cabi.org

India

CABI, 2nd Floor, CG Block
NASC Complex, DP Shastri
Marg
Opp. Todapur Village, PUSA
New Delhi – 110012, India

T: +91 (0)11 25841906
E: india@cabi.org

Malaysia

CABI, Building A19
43400 MARDI Serdang
Selangor, Malaysia

T: +60 (0) 3 89432921
E: cabisea@cabi.org

Pakistan

CABI, Opposite 1-A
Data Gunj Baksh Road
Satellite Town, PO Box 8
Rawalpindi, Pakistan

T: +92 51 9292062
T: +92 51 8434979
E: cabi.cwa@cabi.org

EUROPE

Netherlands

CABI, Landgoed Leusderend
32 3832 RC Leusden
The Netherlands

T: +31 (0)33 4321031
E: netherlands@cabi.org

Switzerland

CABI, Rue des Grillons 1
CH-2800 Delémont
Switzerland

T: +41 (0)32 4214870
E: europe-CH@cabi.org

UK

CABI, Nosworthy Way
Wallingford, Oxfordshire
OX10 8DE, UK

T: +44 (0)1491 832111
E: corporate@cabi.org

CABI, Bakeham Lane
Egham, Surrey
TW20 9TY, UK

T: +44 (0)1491 829080
E: cabieuropew-uk@cabi.org
E: microbialservices@cabi.org