Reports on dissemination activities II

Deliverable D11.6

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PoshBee

Pan-european assessment, monitoring, and mitigation of stressors on the health of bees

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Preface

Work Package 11's primary aim is to effectively distribute and circulate PoshBee's research among the project's main stakeholder groups and to increase public awareness of the importance of safeguarding wild and managed bees. To achieve this objective, PoshBee employs various offline and online dissemination methods as part of its strategy to reach a broad audience of relevant stakeholders. In the first half of this 60-month project (months 1-30), PoshBee developed and solidified its communication strategy and dissemination plan (D11.3), as well as its exploitation plan (D11.4). Based on these two strategic documents, the project has conducted a series of communication, dissemination and exploitation activities. The ones that took place in the first 30 months of the project are reported in deliverable D11.5: Reports on dissemination activities I. The current D11.6 describes and evaluates PoshBee's outreach and knowledge transfer activities conducted during the second part of the project (months 31-60).

Summary

Deliverable D11.6 reports on the communication, dissemination and exploitation activities conducted in the latter two and a half years of PoshBee's duration (months 31-60). The report provides an overview of the main types of tools and channels used to transfer the project's results to the relevant stakeholder groups, as well as evaluates their performance based on a set of Key Performance Indicators (KPIs). It covers the project's outreach materials; news via the website, social media channels, press releases and newsletters; scientific publications and events; as well as targeted materials adapted to the respective audience's needs such as practice abstracts, stakeholder summaries, training videos, etc. In addition, the document includes a detailed list of outreach activities in which PoshBee members engaged during this period (Annex 1).

1. Introduction

Work Package (WP) 11 "Dissemination, Communication & Knowledge Transfer" aims to maximise PoshBee's impact by transferring project results to the parties that would benefit from them the most. This report summarises the main activities conducted in the first half of the project and reports on the communication, dissemination and exploitation activities that took place in the second half of the project. It thus provides a concise representation of WP11's efforts to increase PoshBee's reach and translate its scientific results into societal impact.

2. Summary of the activities conducted in months 1-30

In the first 30 months of the project, the outreach efforts focused on effectively promoting the project and its goals by establishing a strong visual identity and implementing it in all PoshBee materials. The project website, social media channels, and annual newsletters were set up and their visitors started to grow at a healthy rate, with relevant content published on a regular basis. PoshBee also interacted with a number of external media outlets, issued press releases and published practice abstracts to provide concise information to practitioners. Multiple scientific papers were published, presenting the academic world with PoshBee's most recent findings. In addition, project members presented their results at various international events.

3. Overview of the activities in months 31-60

Building on the strong outreach foundation established in the first half of the project, the second two and a half years were dedicated to actively engaging with stakeholders, disseminating PoshBee's

results and ensuring their sustainable legacy through dedicated exploitation paths. A list of the communication and dissemination activities in which partners engaged from months 31 to 60 (M31-M60) can be found in Annex 1. This annex includes an overview of the involved partner, the date and place of the occurrence, and the target audience. This chapter reports on the main outreach tools which were employed by the project in order to reach relevant target groups.

3.1. Project website

The PoshBee website (www.poshbee.eu) is a primary tool for project dissemination and functions as a central information hub containing PoshBee's objectives, goals and outcomes. It comprises individual pages with insights on the project's background, partners, news, events, publications, materials, technical innovations, and more. Further details on the project's structure and internal part can be obtained from Deliverable 11.1.

The website has been regularly updated to reflect the latest project news and results, thus keeping visitors informed and interested. In the months 31-60, PoshBee published 112 news items, presenting the latest project results and updates, and it promoted 40 new events relevant to the project. In addition, new functionalities (e.g., a feature to assist visually impaired visitors in using the website, providing short descriptions for each website image) were added to ensure that all project materials, resources and results are featured in the most user-friendly way. Notably, based on feedback received by PoshBee's reviewers, the Videos page was restructured to better illustrate all the project videos and their thematic scope: PoshBee training videos, PoshBee overview videos, and Videos featuring PoshBee.

Several new sections were also incorporated into the website:

- **Technical innovations**: presenting PoshBee's innovations in order to facilitate the work of other scientists as well as beekeepers in the field.
- **Insider**: highlighting the invaluable work done by PoshBee's organisations and researchers.
- **Initiatives**: promoting the research projects, networks, initiatives and organisations across Europe that protect and improve pollinator health.

Due to this continuous flow of content and structural updates, the website continued to attract new visitors. In months 31-60, a total of 21,014 users visited the website, resulting in 70,557 page views and 30,255 sessions. The project continued to engage new audiences as evidenced by the fact that the majority of the users were new (88%) compared to 12% returning visitors. The website was visited by users from 168 countries with most of the website visitors coming from Germany, the United States, the United Kingdom, France, the Netherlands, Finland, Italy, Ireland, China and Austria.

3.2. Promotional materials

At the beginning of the project, a PoshBee brochure and poster were created to introduce the main objectives of the project. To illustrate the progress made towards reaching these objectives and to celebrate the results of project members, WP11 designed a special project Legacy brochure (Figure 1). It summarises the key findings of each WP, offering a glimpse into what was attained in the last five years. To further its reach, the Legacy brochure was shared on social media and via a short news item on the project website. It is also available on the website's Media Centre and it was disseminated during PoshBee's final meeting. Lastly, copies of it were sent to interested parties from PoshBee's

board of stakeholders and to project members who will distribute the brochure at large events like Apimondia 2023 and at beekeeping courses with over 500 participants.

Figure 1: PoshBee Legacy brochure.

WP11 also created outreach materials in less traditional formats, such as two videos highlighting the project's main achievements from 2020 and 2022. The "The PoshBee Project: Highlights for 2020" video accumulated 111 views, and the "PoshBee 2022 Highlights" had 89 views. These were further disseminated via PoshBee's social media channels and website, and are available on the project's YouTube channel and via the website's Media Centre.

3.3. Social media channels

PoshBee utilised its social media channels on Twitter and Facebook as a means to regularly communicate project updates and disseminate its latest results. In addition, to ensure consistent and relevant content for project followers, targeted social media messages were published to raise awareness of suitable events, as well as in recognition of international days such as Environment Day, Wildlife Day, Biodiversity Day, International Bee Day, and others. PoshBee-specific social media campaigns were also carried out in order to disseminate information on one specific topic:

- **'PoshBee research'**: highlighting older publications generated by the project, thereby creating traffic to their original repositories.
- **'Faces of PoshBee'**: presenting the work done by the different teams and researchers in the project.
- **'PoshBee Videos'**: promoting the project's training videos in order to increase their impact.
- **'Pollinator Initiatives'**: raising awareness of other initiatives, projects and networks working to protect bees (Figure 2).
- **'PoshBee Wrap up'**: promoting all the papers published under PoshBee in the last five years.

Figure 2: PoshBee Pollinator Initiatives post.

The content shared on PoshBee's YouTube channel also grew significantly in the second half of the project. It currently, holds 25 project videos, most of which are PoshBee training videos, aimed at helping the acquisition of new bee-related research skills (More in section 3.13).

Thanks to PoshBee's consistent and targeted efforts, the project's social media accounts on Twitter, Facebook and YouTube have been performing well and are enjoying a healthy flow of visitors and engagement (Table 1).

Table 1: Performance of PoshBee's social media accounts.

	Twitter	Facebook	YouTube
Number of followers	1,155	402	48
Number of posts from months 31-60	264	192	22
Number of impressions/views for months 31-60* *for Twitter, data is available only for months 37-60	183,200	30,603	3,900

3.4. Press releases

As envisioned in D11.3, PoshBee disseminated press releases to inform the general public and the media about significant project accomplishments in a compelling and comprehensible manner. In the second half of the project prior to the submission of D11.6, PoshBee published two press releases and distributed them via two major science news distributors EurekAlert! and AlphaGalileo. The first one, titled "*No evidence that Glyphosate alone, or in combination with a common parasite, has negative lethal or sublethal effects on bumble bees*" shares important project results from an ecotoxicological

research study investigating the effects of one of the most commonly used pesticides on bumble bees. The second one – "Between research and practice: an EU project's collection of stakeholder summaries" – aims to broaden the reach of PoshBee's collection of stakeholder summaries. These releases were strongly promoted across the project's outreach platforms, including the website and social media, and gathered 2,782 views on EurekAlert! and 837 hits on AlphaGalileo. Both of them are easily findable and available for download under the project's Media Centre. A third and final press release was published at the end of May 2023 announcing PoshBee's conclusion and summarising the project's main accomplishments.

3.5. Newsletters

PoshBee issued an annual "Buzz" newsletter to provide its stakeholders with a brief summary of the project's main accomplishments over the past year. The newsletters present the key achievements and research progress of the project in an appealing and captivating manner, and include links for additional reading on each topic. During the second half of the project, three issues (volume 3,volume 4 and the final volume) of the newsletter were distributed (Figure 3). Volume 3 was distributed to 148 recipients, volume 4 to 184 and the final volume to 191. All the newsletters were promoted via the project's social media channels and website and are available for download in the Media Centre.

Figure 3: PoshBee newsletter volumes 3, 4 and the final volume.

3.6. Scientific publications and deliverables

During the second half of the project, PoshBee partners published 45 scientific publications with several others in the pipeline and due for publication after the project's end. The full list of PoshBee papers both published and currently underway is available in Annex 2. To adhere to the open access mandates set forth by the European Commission for Horizon 2020 projects to maximise the accessibility of its research, these are accessible under open access. Moreover, they are securely stored in open access repositories to ensure their long-term availability. They are also accessible on the project's website and linked in PoshBee's RIO collection.

PoshBee's deliverables represent another valuable source of project results. To ensure their accessibility for stakeholders, all public deliverables are available for download via PoshBee's website library. In addition, several summaries have been provided for key project deliverables which are otherwise confidential.

3.7. Open access collection in the journal Research Ideas and Outcomes

PoshBee has launched an open access topical collection called "PoshBee Project Outcomes" in the journal Research Ideas and Outcomes (RIO) to ensure its main results are accessible to one of its main target groups – scientists. RIO promotes transparency, trustworthiness, and efficiency in research by hosting comprehensive topical collections with project results, including unconventional research outcomes such as reports and grant proposals. This collection thus allows the centralisation of project outputs and ensures their availability beyond PoshBee's lifetime.

It currently contains the project's grant proposal, 42 linked papers, and a project milestone, and it will continue to be updated as new results become available. To raise awareness and maximise the benefits resulting from the collection, a combination of promotional and dissemination tools such as news announcements, social media promotion, and a feature in PoshBee's newsletter have been used. More information on PoshBee's collection in the journal Research Ideas and Outcomes is available in D11.8 Special issue in open-access journal.

3.8. Events

During the second half of the project, PoshBee members attended and participated in numerous relevant events to further spread their results to potential users and stakeholders (Annex 1). Notably, PoshBee was a part of the 2021 EU Pollinator Week, where Dr Dalel Askri of BioPark Archamps presented the project's research on the Bee Health Card, mass spectrometry analysis, MALDI BeeTyping and air sampling methods (Figure 4). Her talk focused on the expected results from these tools in terms of bee health monitoring and sustainability, as well as the atmospheric sampler prototypes that were shipped to beekeepers and stakeholders in different countries from April to August 2021.

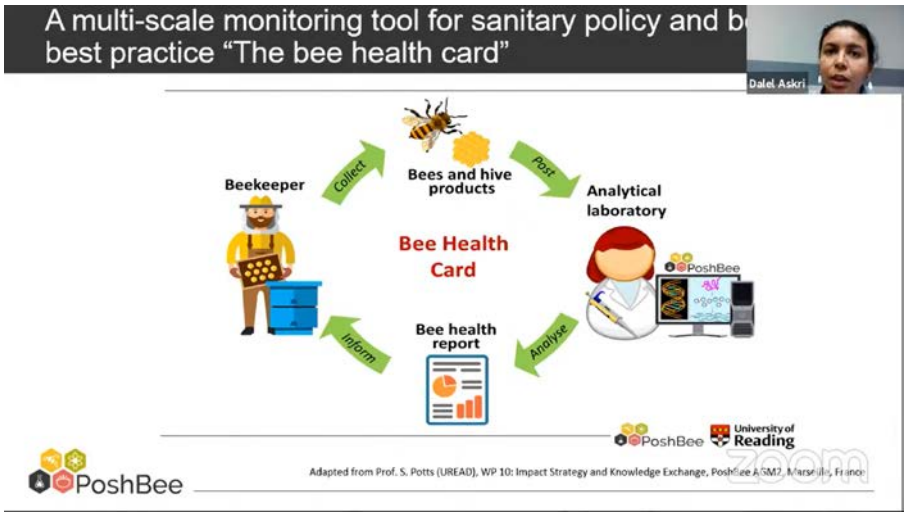

Figure 4: Dalel Askri presenting the Bee Health Card.

In addition, in cooperation with two other European projects (B-GOOD and Safeguard), PoshBee organised a pollinator awareness-raising event at the National Museum of Natural History at the Bulgarian Academy of Sciences. The exhibit will be inaugurated in June and will remain open throughout the summer. Its goal is to inform the public about the importance of pollinators, the causes of their decline, and what projects like PoshBee are doing to fight this decline. The exhibit will present information on four window displays with text and graphics in Bulgarian and English, providing insights into pollinator species, trends in their decline, and the main causes. Promotional materials will also be created to distribute the main information from the exhibit, along with project materials in English.

3.9. Practice abstracts

To make project results more accessible to practitioners and to foster sustainable pollination, PoshBee published 12 new practice abstracts on the EIP-Agri platform. Together with the 4 abstracts published in the first half of the project, the project has a total of 16 practice abstracts. These concise and easily understandable pieces of information present the practical implications of PoshBee's results and cover the project's full life cycle, from its objectives (presented in practice abstract 1) to its results. Hosting them on the EIP-AGRI platform ensures their accessibility to actors from the practice and intermediary sectors long after the project's end. All of PoshBee's practice abstracts are available here.

3.10. Stakeholder summaries

PoshBee aims to support healthy bee populations and sustainable beekeeping through successful cooperation between diverse stakeholder groups. To bridge the gap between research and practice, the project provides stakeholder summaries for all major published research outputs using plain language and visual abstracts to convey their practical value and benefits to the stakeholder. PoshBee has published 20 such summaries, 15 of which are available in languages other than English.

To maximise the findability and accessibility of these summaries, they are disseminated, along with the original paper, to the relevant stakeholders, while they are also posted on the PoshBee website and social media channels. To further increase their reach, WP11 published a dedicated press release announcing the project's collection. The press release accumulated 986 views on EurekAlert! and 344 hits on AlphaGalileo.

Lastly, to provide stakeholders with a comprehensive overview of the project's summaries, PoshBee prepared a "Stakeholder summaries booklet". The booklet was disseminated via the project's outreach channels and it was distributed at PoshBee's final annual general meeting. In addition, numerous copies of the booklet were distributed to members of the project's stakeholder board on request, such as organisers of beekeeping courses and policy advisors, as well as to project members who expressed interest in presenting the booklet at events such as Apimondia 2023 and at large beekeeping courses (over 500 participants).

3.11. Horizon Results Platform

PoshBee utilised the Horizon Results Platform to display one of its Key Exploitable Results (KERs), carefully chosen and prioritised based on its significant potential to be exploited. Thus, PoshBee partners — the University of Udine and the University of Bern — published their policy-related key exploitable result called "Sulfoxaflor can benefit *Varroa destructor* and might interact with a commonly used acaricide" on the Horizon Results Platform (Figure 5).

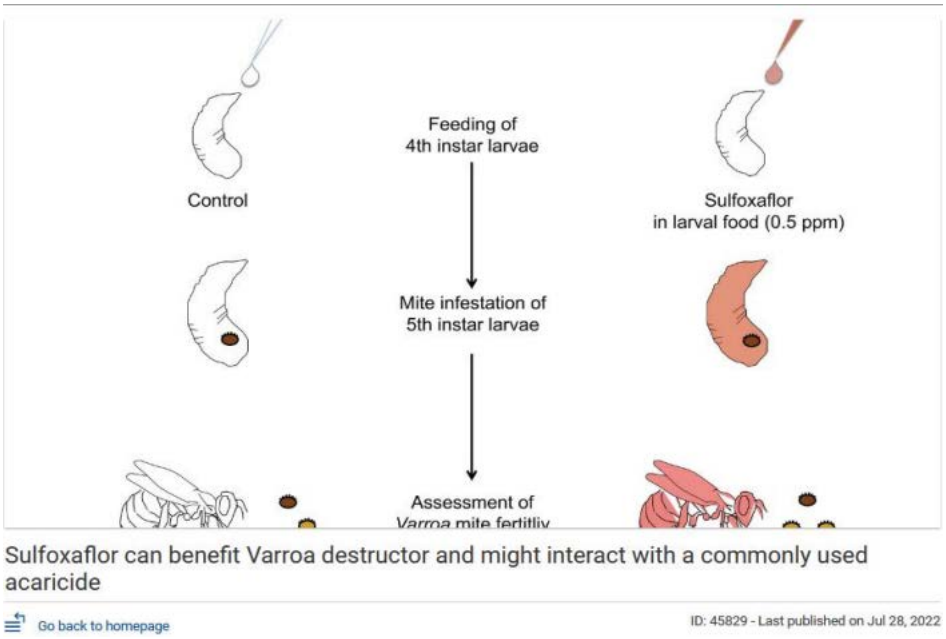

Figure 5: PoshBee's KER on the Horizon Results Platform.

This result provides further evidence that neonicotinoid-like insecticides can not only have negative consequences for bees, but also seem to have positive effects on their parasitic mites. PoshBee partners believe this KER to be highly relevant for policymakers, who should consider the positive correlation between sulfoxaflor and mite reproduction when assessing the risk of agrochemicals to bees. The publication of this result was further disseminated via the project's website and social media channels.

3.12. Training to build bee health capacity

PoshBee's WP11 aims to provide targeted training to early career researchers, veterinarians, and other specialists to improve bee health capacity. This objective was achieved via two main types of activities: a PoshBee training school and PoshBee training videos.

3.12.1. PoshBee training school

Project partner UMONS organised a two-day European Bee Course in Mons, Belgium, on April 12th and 13th, 2022, which was open to all stakeholders inside and outside of PoshBee. In order to reach a broad audience for the training school, WP11 began promoting it one and a half months before it took place. It created a promotional poster (Figure 6) and published a news article on the PoshBee

website, providing details about the workshop's schedule and application process. PoshBee also utilised its social media channels to increase awareness, advertise, and provide updates about the event.

Figure 6: Training promotional poster

After reviewing the applications, 15 participants were accepted and invited to attend. The training school agenda emphasized developing practical bee-related skills, with special attention given to bumblebees and solitary bees. During the workshop, researchers presented the new analysis techniques developed within PoshBee and disseminated the main project results, providing insights into their importance for future research and improving beekeeping and pollination in Europe. More information on the training school can be found in deliverable D11.7.

3.12.2. PoshBee training videos

PoshBee has produced 17 short instructional training videos, which are available on the project's dedicated playlist on YouTube. These videos serve both communicational and educational purposes, elevating the project's dissemination. With the main goal to demonstrate project protocols, they not only popularise PoshBee's outputs but also establish the project as a source of credible and valuable information. The videos were created with the support of multiple project partners and bear the PoshBee project branding. They have accumulated 3,356 views.

3.13. Policy briefs

In order to maximise the exploitation potential of the project's scientific findings, PoshBee will produce three policy briefs:

- 1. Effects of multiple stressors
- 2. PoshBee Toolbox: A portfolio of high quality methodologies, tools, and practice guides for pollinators
- 3. Mitigating multiple stressors on managed pollinators: Effectiveness and feasibility of implementing response options

The easy-to-navigate briefs will contain research-based policy recommendations, ensuring the societal impact of PoshBee's results. These will be disseminated via the project's social media channels and website, and their publication in the project's open access collection in the journal Research Ideas and Outcomes will be considered. Such a publication could facilitate the citation of the policy briefs and ensure their findability and accessibility after the project's end.

3.14. General dissemination activities

A number of general dissemination activities were also conducted (see Annex 1). Notably, PoshBee was featured in:

- the Agri Research EU factsheet which highlights the importance of R&I on public goods from agriculture and forestry;
- the winter 2020 issue of the Irish Organic Association magazine which introduces the project's main objectives and achievements to its audience;
- an article in the DailyScience magazine (Belgium) which discusses the research performed within PoshBee and the coordination with various stakeholders including policy makers;
- the academic podcast Know Show where PoshBee coordinator Prof. Mark Brown of Royal Holloway University of London (RHUL) participated in an episode titled "How important are bees to society?" to discuss the project's bee health research and pollinator policies across Europe;
- a 'Success story' published by the European Commission's Directorate-General for Research and Innovation which calls attention to PoshBee's evidence, tools and policy proposals to enhance bee health.

4. Conclusion

This report provides a concise overview of the main outreach tools and channels used to disseminate PoshBee's results in the second half of the project (M31-M60). The dissemination activities conducted were essential to maximise the impact of PoshBee's scientific findings and ensure they are shared with the relevant stakeholders. To guarantee the project's results are presented in an accessible and audience-tailored manner, PoshBee conducted a wide variety of activities based on the needs of the different groups.

To present its findings to the scientific audience, PoshBee published multiple scientific papers, presented project results at relevant events, shared its project deliverables and regularly updated its open access collection in the journal Research Ideas and Outcomes. In addition, it presented early career researchers, veterinarians, and other specialists with a training school and a collection of training videos illustrating the project's protocols and building better bee health capacity.

To make sure its scientific results have a practical application, PoshBee presented practice abstracts and stakeholder summaries illustrating the practical implications of its findings. To facilitate the transition of scientific findings into policy implications, PoshBee published one of its KERs on the Horizon Results Platform and prepared policy briefs.

As for the media and the general public, PoshBee produced a number of outreach materials presenting results and updates in an accessible and entertaining manner, such as promotional materials, newsletters, press releases, publications in popular media and website and social media updates.

This tailored approach to dissemination activities ensured that WP11 – with the help of the entire consortium – successfully achieved the targets and timelines set in the project's communication strategy and dissemination plan (D11.3), as well as in its exploitation plan (D11.4). Ultimately, this ensures that the substantial number of results generated during PoshBee's lifetime have a long-lasting impact and contribute to sustainable beekeeping and pollination.

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Yovcheva, N. & Metodiev, T. (2023). *Special issue in open-access journal*. Deliverable D11.8 EU Horizon 2020 PoshBee Project, Grant agreement No. 773921.

Annex 1

PoshBee list of Dissemination & Communication Activities

Type of activity: 1) Organisation of a Conference, 2) Organisation of a Workshop, 3) Press release, 4) Non-scientific and non-peer-reviewed publication (popularised publication), 5) Exhibition, 6) Flyer, 7) Training, 8) Social Media, 9) Website; 10) Communication Campaign (e.g. Radio, TV), 11) Participation to a Conference, 12) Participation to a Workshop, 13) Participation to an Event other than a Conference or a Workshop, 14) Video/Film, 15) Brokerage Event, 16) Pitch Event, 17) Trade Fair, 18) Participation in activities organized jointly with other EU project(s), 19) Other

Type of audience: 1) Scientific Community (Higher Education, Research), 2) Industry, 3) Civil Society, 4) General Public, 5) Policy makers, 6) Media, 7) Investors, 8) Customers, 9) Other

Size: best estimate of audience
Country: country or international (Intl) audience addressed

No.	Type of activity	Main partner	Title	Date	Place	Type of audience	Size of audience	Countries addressed
1	19	ALU-FR	Guest lecture: Pesticides and other stressors for bees and pollination	15 Dec 2020	Germany/ Hohenheim	1	>50	EU
2	4	PENSOFT	The Mission of Sustainable Bee Health	Dec 2020	Ireland	2, 4, 5, 9	2 200 print + more digital readers	IE, Intl
3	14	PENSOFT	The PoshBee Project: Highlights for 2020	11 Jan 2021	Bulgaria	1, 2, 3, 4, 5, 6, 7, 8, 9	>71	Intl
4	14	ALU-FR	PoshBee Field and Semi-Field Experiments: University of Freiburg	13 Jan 2021	Germany	1, 2, 3, 4, 5, 6, 7, 8, 9	>195	Intl
5	19	EPKK	EPKK members newsletter	15 Jan 2021	Estonia	9	8000	EE
6	11	TCD	Irish Pollinator Research Network	20 Jan 2021	online	1	25	EU
7	12	INRA	Consideration of sublethal doses in risk assessment of pesticides : advances, locks and perspective	30 Jan 2021	France / Paris	1, 5, 9	30	EU
8	19	UM	Escuela de Apicultura de Gran Canaria	5 Feb 2021	Gran Canaria	9	12	ES

9	4	ANSES	Les chercheurs du projet PoshBee demandent que l'EFSA élargisse l'approche systémique pour mener l'évaluation des risques liés aux pesticides à des espèces complémentaires de pollinisateurs	5 Mar 2021	France	9	800	FR
10	11	PIWET	58 Naukowa Konferencja Pszczelarska	9 Mar 2021	Online (Poland)	1, 9	130	PL
11	14	SLU	PoshBee Research: Testing effects of pesticide exposure to bees and bee larvae	10 Mar 2021	Sweden	1, 2, 3, 4, 5, 6, 7, 8, 9	>160	FR
12	19	UREAD	Meeting with Fleet & District Beekeeping Association	11 Mar 2021	Online	9	30	UK
13	11	UM	1ª Jornada técnica de Cría i Selecció. Grup Balear de Cría i Selecció de l´Abella Autóctona "Dotze Reines"	13 Mar 2021	Online (Mallorca)	9	50	ES
14	19	UFZ	Post Graduate Symposium TCD 2021	15 Mar 2021	Ireland/Dublin	1	50	IE
15	19	UMONS, INRA, CREA, BERN	Scientific animation: Pollen fosters honeybee tolerance to pesticides	1 Apr 2021	France	1, 4, 9	35	EU
16	14	FIBKA, PENSOFT	PoshBee: Sampling honey bee hives in Cork, Ireland	2 Apr 2021	Ireland	1, 2, 3, 4, 5, 6, 7, 8, 9	>63	Intl
17	8	RHUL	Twitter posting on PoshBee publication	7 Apr 2021	UK	1, 2, 3, 4, 5, 6, 7, 8, 9	500 000	Intl
18	19	ALU-FR	Vermächtnis Biodiversität: Agrarpolitik für nächste Generationen	21 Apr 2021	Volkswagen Foundation	1	50	DE

19	19	ALU-FR	Fachgespräch Biodiversität im Obstbau	4 May 2021	Online	1, 5, 9	60	EU
20	14	MLU	Biology PhD student working with wild bees: Sara Hellström demonstrates how a wild bee can be encouraged to nest in artificial medium (WP4).	8 May 2021	Germany	1, 4, 9	>1000	Intl
21	14	MLU	PoshBee PhD student interview: Sara Hellström	9 May 2021	Germany	1, 4, 9	>1000	Intl
22	4	WBF-Agroscope	Bienen mit mangelhafter Nahrung reagieren sensitiver auf ein Pflanzenschutzmittel	15 May 2021	Switzerland	4, 5, 9	10000	CH (DE, AU)
23	19	MLU	Online-Gesprächsrunde mit Verkostung zum Weltbienentag: Eine bienenfreundliche Welt für das Leben der Bienen!	20 May 2021	Germany	4	>1000	DE, AU, SH
24	14	MLU	Faktoren für die Vitalität von Bienengemeinschaften und anderen Bestäubern (How to maintain healthy pollinator communities)	20 May 2021	Germany	4, 6, 9	>250	DE, AU, CH
25	19	ALU-FR	BSc Modul Landschaftspflege on PoshBee WP7 experiments	25 May 2021	Germany/Freiburg	1	50	DE
26	19	ATPOLL, RBH	Photos, videos and short reports for social media	Ongoing	Online	1, 2, 3, 4, 5, 6, 7, 8, 9	>500	Intl
27	3	EPKK	Call to participate in 2 PoshBee surveys (how to deliver results and current	4 Jun 2021	Estonia	9	>110	EE

			best practice to support bee health)					
28	11	CREA	Italian Congress of Entomology (CNIE)	7-11 Jun 2021	Italy/Turin	1	~100	IT
29	13	ANSES, UBx	Online Chemical Science Doctoral School Day	10 Jun 2021	France/Bordeaux	1	150	FR
30	19	Pensoft	Poshbee Buzz newsletter issue 3	15 Jun 2021	Bulgaria	1, 2, 3, 4, 5, 6, 7, 8, 9	>500	Intl
31	11	TCD, UFZ	ENVIRON 2021	16 Jun 2021	online	1	~100	IE
32	11	PIWET	The European Green Deal in the fields of Poland	16 Jun 2021	online	1, 5, 9	~40	PL
33	13	ANSES, UBx	Mixed Research Unit Day	02 Jul 2021	France/Bordeaux	1	50	FR
34	11	UM	Cuarta edición de la Universidad de Verano de Valencia	09 Jul 2021	Spain/Aras de los Olmos (Valencia)	4	80	ES
35	14	INRA, Pensoft	PoshBee laboratory experiments on pesticide exposure and pollen diet effects on bees	06 Aug 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>333	Intl
36	11	ALU-FR, WBF Agroscope	GfÖ virtual annual conference	01 Sep 2021	online	1	1000	Intl
37	13	UREAD	National Bee Unit (gov UK) online talk	07 Sep 2021	online	5	~40	EU
38	11	UM	XIX Congreso Ibérico de Entomologia	21-24 Sep 2021	online	1	400	ES
39	13	BIOPARK ARCHAMPS, CNRS	EU Pollinator Week (European Research Projects: Monitoring Pollinators and Their Stressors session)	27-30 Sep 2021	online	1, 5, 9	~100	EU
40	14	ATPOLL, RBH, Pensoft	Specialised Equipment for Honeybee Studies	28 Sep 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>84	Intl
41	14	ANSES, Pensoft	PoshBee research: The PoshBee database	19 Oct 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>112	Intl

42	14	ANSES, Pensoft	PoshBee research: Pathogen analysis	19 Oct 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>124	Intl
43	11	UREAD	National Honey Show (BeeCraft research lectures 2021)	22 Oct 2021	England/ Esher	9	~40	EU
44	11	UFZ, TCD	Scandinavian Association for Pollination Ecology (SCAPE) 2021	23 Oct 2021	Poland	1	114	EU
45	14	ANSES, Pensoft	PoshBee Research: Nectar Pesticide Analysis	1 Nov 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>184	Intl
46	14	WBF-Agroscope, Pensoft	Methods to assess the health status of the solitary bee Osmia bicornis	4 Nov 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>53	Intl
47	14	ANSES, Pensoft	PoshBee Research: Nectar Extraction from Bees	9 Nov 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>144	Intl
48	11	INRAE	UIEIS, Union Internationale pour l'Etude des Insectes Sociaux, Europe	11 Nov 2021	online	1, 2, 3, 4, 5, 9	100	EU
49	11	BIOPARK ARCHAMPS, CNRS	2nd International Webinar on "Mass Spectrometry & Analytical Techniques"	11 Nov 2021	online	1	~80	Intl
50	14	CNRS/Bio Park, Pensoft	PoshBee research: Analysis of haemolymph with MALDI BeeTyping ®	12 Nov 2021	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>69	Intl
51	11	INRAE, UMONS	GDR POLLINisation, réseaux d'interaction et fonctionnalité des ÉCOsystèmes	16-18 Nov 2021	France/Toulouse	1, 3, 4	50	FR
52	3	Pensoft, RHUL	No evidence that Glyphosate alone, or in combination with a common parasite, has negative lethal or sublethal effects on bumble bees	17 Nov 2021	EurekAlert!	1, 2, 3, 4, 5, 6, 7, 8, 9	>1191	Intl

53	3	Pensoft, RHUL	No evidence that Glyphosate alone, or in combination with a common parasite, has negative lethal or sublethal effects on bumble bees	17 Nov 2021	AlphaGalileo	1, 2, 3, 4, 5, 6, 7, 8, 9	>700	Intl
54	11	EMÜ	Conference "Estonian Plant Protection 100"	24 Nov 2021	Estonia/Tartu	1, 2, 3, 5, 9	~100	EE
55	11	EMÜ	"Agriculture and the environment"	30 Nov 2021	Estonia/Tartu	1, 2, 3, 5, 9	~75	EE
56	1	EMÜ, EPBKA	Conference "How to protect the pollinators in Estonia?"	09 Dec 2021	Estonia/Tartu	1, 2, 3, 4, 5, 6, 9	~260	EE
57	13	INRAE	Journée Technique de l'ADAPI	14 Dec 2021	France/Puyloubier	9	50	FR
58	13	ANSES	Bee health - scientific meeting	14 Dec 2021	France/Paris	4	150	FR
59	8	NFU	Tweet about #PoshBeeAGM2022	11 Jan 2022	Twitter	1, 2, 3, 4, 5, 6, 9	1462	Intl
60	3	Coldiretti	Tutela delle api: i risultati del progetto Poshbee	25 Jan 2022	11 Jan 2022	3, 4, 5, 9	340 000	IT
61	14	UMONS, Pensoft	PoshBee Research: Effects of agrochemical-nutrition interactions on bee health in the laboratory	8 Feb 2022	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>144	Intl
62	14	UMONS, Pensoft	PoshBee Research: Pesticide risk assessment experiments on wild bee species	17 Feb 2022	YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>116	Intl
63	11	PIWET	59 Naukowa Konferencja Pszczelarska	08 Mar 2022	Poland	1, 9	136	PL
64	19	EPKK	Newsletter: Distribution of information that stakeholder summaries are available for public	31 Mar 2022	Estonia	2	>111	EE

			on the PoshBee website					
65	13	ANSES	83rd MEETING OF THE EFSA ADVISORY FORUM	06-07 Apr 2022	France/Paris	5	40	EU
66	2	UMONS, PENSOFT	PoshBee workshop: Develop your bee-related research skills and find out the latest trends in the field	12-13 Apr 2022	Belgium/Mons	4	15	BE, PT, DE, SE, FR, NL, UK
67	19	WBF-Agroscope, Pensoft	Stakeholder brief: Bee Tracker - an open-source machine learning-based video analysis software for the assessment of nesting and foraging performance of cavity-nesting solitary bees	16 Apr 2022	Intl	1, 2	>500	Intl
68	3	ALU-FR	Bumblebee`s nutrition influences their pesticide resistance	20 Apr 2022	Uni Freiburg Homepage	1, 2, 3, 4, 5, 6, 7, 8, 9	>300	Intl/DE
69	3	ALU-FR	Ernährung von Hummeln beeinflusst ihre Pestizid-Resistenz	20 Apr 2022	Uni Freiburg Homepage	1, 2, 3, 4, 5, 6, 7, 8, 9	>300	DE
70	11	BIOPARK ARCHAMPS, CNRS	5th Symposium of the Belgian Proteomics Association BePAc 2022	4 May 2022	Belgium/Liège	1	~100	Intl
71	19	Pensoft	Poshbee Buzz newsletter issue 4	9 May 2022	Bulgaria	1, 2, 3, 4, 5, 6, 7, 8, 9	>500	Intl
72	19	EPKK	Distribution of PoshBee Buzz newsletter issue 4	12 May 2022	Estonia	2	>112	EE
73	13	MLU	Regional beekeeper meeting	20 May 2022	Germany	3	50	DE

74	11	RHUL	International Congress of the International Union for the Study of Social Insects (IUSSI)	3-7 Jul 2022	USA/San Diego	1	1000	Intl
75	13	UREAD	Public exhibtion: Value of polinators	18 Jul 2022	UK/Tower of London	4	>100	Intl
76	3	Coldiretti	Siepi e bordure fiorite lungo i campi coltivati supportano gli insetti impollinatori	22 Jul 2022	Il Punto Coldiretti	4, 9	340000 subscribers	IT
77	3	Coldiretti	Api e lotta alla varroa: le ultime novità dal mondo scientifico	27 Jul 2022	Il Punto Coldiretti	4, 9	340000 subscribers	IT
78	11	WBF, INRAE, ATPOLL, UMONS, RBH, PIWET, ALU-FR,	ECCB conference	22-26 Aug 2022	Czeck Republic/Prague	1	300	Intl
79	11	RHUL, PIWET, CNRS, BIOPARK ARCHAMPS, INRAE, UM	EurBee9 – 9th European Congress of Apidology	20-22 Sep 2022	Serbia/Belgrade	1	350	Intl
80	19	UM	Poster: Interactions of different pesticides and Nosema ceranae infection in the honey bee Apis mellifera.	20-22 Sep 2022	Serbia/Belgrade	1	350	Intl
81	11	WBF, ALLU-FR, UMONS, INRAE, ATPOLL, RBH	ICPPR conference	18-21 Oct 2022	UK/York	1, 2, 5	>200	Intl

82	3	ADEA-ASAJA	Poshbee: the European project to improve bee health	21 Oct 2022	Web Asaja Murcia	4	>650	Intl
83	11	WBF, ALLU-FR, UMONS, INRAE, ATPOLL, RBH	ESA conference	13-16 Nov 2022	Canada/Vancouver	1, 2	600	Intl
84	19	WBF, UMONS, INRAE	Poster: A more diverse pollen nutrition matters for developing solitary bees but does not mitigate the negative impact of pesticides	13-16 Nov 2022	Canada/Vancouver	1, 2	600	Intl
85	11	ALU-FR	SFE2-GfÖ-EEF joint meeting, International conference on ecological sciences	21-25 Nov 2022	France/Metz	1	1003	Intl
86	19	ALU-FR	Poster: Inconsistent negative impacts of azoxystrobin-based fungicide on bumblebee colonies in a dose-response experiment mimicking fungicide decline	21-25 Nov 2022	France/Metz	1	>1600	Intl
87	13	UNAAPI	Crt- patologie apistiche Unaapi – incontri seminariali	23-24 Nov 2022	Italy/Sacrofano - Roma	9	70	IT
88	13	EMÜ	Beekeepers meeting	24 Nov 2022	Estonia/Tartu	9	20	LAT
89	3	Pensoft, RHUL	Between research and practice: an EU project's collection of stakeholder summaries	19 Dec 2022	EurekAlert!	3, 4, 5, 6	>1000	Intl
90	3	Pensoft, RHUL	Between research and practice: an EU project's collection of stakeholder summaries	19 Dec 2022	AlphaGalileo	3, 4, 5, 6	>350	Intl

91	14	Pensoft	PoshBee 2022 highlights	21 Dec 2022	YouTube	1, 4	120	Intl
92	11	ANSES	AEEMA (Association pour l'Étude de l'Épidémiologie des Maladies Animales): Les suivis de terrain évaluant la santé des pollinisateurs élargissent peu à peu leurs spectres d'étude	6 Jan 2023	France/Maisons-Alfort	1	150	Intl
93	4	UNAAPI	Il polline rallenta l'invecchiamento delle api infestate da Varroa	24 Jan 2023	UNAAPI website	1, 4, 9	9000	Intl
94	11	UNAAPI	37° Congresso Apicoltura Professionale Italiana-AAPI - Unaapi	26-27 Jan 2023	Italy/Sacrofano - Roma	4, 9	300	IT
95	13	EMÜ	Stakeholder meeting	6 Feb 2023	Estonia/Paide	4, 9	10	EE
96	19	RHUL, Pensoft	PoshBee Stakeholder summaries booklet	20 Feb 2023	International	9	>1500	Intl
97	4	UNAAPI	Proteine in immagini: una nuova frontiera per visualizzare l'impatto dei fattori di stress nelle api mellifere	20 Feb 2023	UNAAPI website	1, 4, 9	9000	Intl
98	11	UNIUD	Entomology Congress 2023	20-23 Feb 2023	Italy/Bolzano	1	50	Intl
99	3	Coldiretti	L'accesso a diverse specie di fiori mitiga i fattori di stress per le api	22 Feb 2023	Il Punto Coldiretti	4, 9	340000	IT
100	3	ADEA-ASAJA	Recommendations for phytosanitary treatments in flowering of fruit trees and avoid damage to bees	28 Feb 2023	Web Asaja Murcia	4	>700	Intl
101	13	RHUL	Departmental Seminar	1 Mar 2023	UK/Oxford	1	40	UK

102	19	RHUL, UMONS, Pensoft, EMÜ, ANSES, CNRS, ALU-FR, MLU, TCD, UNIUD, UREAD	PoshBee Legacy brochure	7 Mar 2023	International	1, 2, 3, 4, 5, 6, 7, 8, 9	>1500	Intl
103	12	CREA	COLOSS Task Force Workshop	8-10 Mar 2023	Croatia/Osijek	1	40	Intl
104	13	FIBKA	Meeting of Beekeepers in Co Cork Ireland: Lecture series	15 Mar 2023	Ireland /Cork	9	40	IRL
105	8	NFU	Tweet about PoshBee AGM2023	22 Mar 2023	Twitter	1, 2, 3, 4, 5, 6, 7, 8, 9	1032	Intl
106	13	EPBKA	Meeting with the GRABees Roma	24 Mar 2023	Italy/Roma	9	6	Intl
107	14	RHUL, Pensoft, BIOPARK ARCHAMPS, CNRS	Monitor peptide changes in honey bee bodies with MALDI mass spectrometry imaging [PoshBee training]	28 Apr 2023	YouTube	1	180	Intl
108	14	RHUL, Pensoft, BIOPARK ARCHAMPS, CNRS	Bottom-Up Mass Spectrometry-Based Proteomics workflow for bee haemolymph analysis [PoshBee training]	28 Apr 2023	YouTube	1	420	Intl
109	14	Pensoft, BIOPARK ARCHAMPS, CNRS	Analysis of haemolymph with MALDI BeeType spotting [PoshBee training]	4 May 2023	YouTube	1	433	Intl
110	13	ALU-FR	Youth 20 (Y20) consultation event	11 May 2023	India/Srinagar	1, 4, 5, 6	300	Intl
111	19	ATPOLL, RBH	Photo Archive for Evaluation of Honeybee Colony Populations in Field	15 May 2023	PoshBee website	1	>200	Intl

			and Semi-Field Studies					
112	19	RHUL	Success story: First in-depth assessment of threats to bee health reveals new ways to help pollinators	15 May 2023	EC website	1, 2, 3, 4, 5, 6, 7, 8, 9	>500	Intl
113	19	RHUL, Pensoft	PoshBee newsletter final volume	25 May 2023	Bulgaria	1, 2, 3, 4, 5, 6, 7, 8, 9	>250	Intl
114	13	ALU-FR	GGBC seminar series	29 May 2023	Sweden/Gothenburg	1	20	SE
115	9	All	PoshBee website	1 Jun 2022-31 May 2023	PoshBee website	1, 2, 3, 4, 5, 6, 7, 8, 9	>21014	Intl
116	8	All	Poshbee Facebook	1 Jun 2022-31 May 2023	PoshBee Facebook	1, 2, 3, 4, 5, 6, 7, 8, 9	>30603	Intl
117	8	All	PoshBee Twitter	1 Jun 2022-31 May 2023	PoshBee Twitter	1, 2, 3, 4, 5, 6, 7, 8, 9	>183200	Intl
118	8	All	PoshBee YouTube	1 Jun 2022-31 May 2023	PoshBee YouTube	1, 2, 3, 4, 5, 6, 7, 8, 9	>3900	Intl
119	8	ADEA-ASAJA	Regular dissemination of Poshbee information through the institutional social media profiles	1 Jun 2022-31 May 2023	ADEA-ASAJA Twitter and Facebook	4	>2000	Intl
120	18	Pensoft	Exhibition: Pollinator awareness-raising event	25 Jun 2023	Bulgaria/Sofia	1, 2, 3, 4, 5, 6, 9	TBD	BG
121	13	FIBKA	FIBKA Beekeeping Summer School	27-30 Jul 2023	Ireland	9	500	IRL
122	11	SLU	Apimondia 2023	04-08 Sep 2023	Chile/Santiago	1, 9	TBD	Intl
123	19	RHUL, UREAD, ANSES, MLU, UFZ, UMONS, CNRS,	Science-Policy report	In prep	Belgium/Brussels	1, 5	TBD	Intl

		BERN et al.						
124	3	RHUL, Pensoft	One step closer to healthy bee populations: The PoshBee project comes to a close	In prep	EurekAlert !	1, 2, 3, 4, 5, 6, 7, 8, 9	TBD	Intl
125	3	RHUL, Pensoft	One step closer to healthy bee populations: The PoshBee project comes to a close	In prep	AlphaGalileo	1, 2, 3, 4, 5, 6, 7, 8, 9	TBD	Intl
126	4	UNAAPI	Gli effetti benefici del polline sulle api parassitate	In prep	l'apis - magazine	1, 4, 9	12000 subscribers	IT

Annex 2

PoshBee list of Dissemination & Communication Activities

List of PoshBee scientific articles

Publication type: (1) Peer-reviewed publication, (2) Paper in a conference proceedings, (3) Book chapter, (4) Thesis, (5) University publication. OA = Open access; WP = Work-Package

No.	Publication type	DOI	Title	Author(s)	Journal	Vol./ Issue	Pages	Year	OA	WP
1	1	10.1038/s41467-020-19715-8	Neonicotinoid Clothianidin reduces honey bee immune response and contributes to Varroa mite proliferation	Desiderato Annoscia, Gennaro Di Prisco, Andrea Becchimanzi, Emilio Caprio, Davide Frizzera, Alberto Linguadoca, Francesco Nazzi & Francesco Pennacchio	Nature Communications	11 (1)	5887	2020	Yes	6
2	1	doi.org/10.1111/1365-2664.13867	Roundup Causes High Levels of Contact Mortality in Bumblebees	Straw E, Carpentier E, Brown M	Journal of Applied Ecology	58 (6)	1167-1176	2021	Yes	3, 6
3	1	10.1126/science.abg9622	Holistic environmental risk assessment for bees	Christopher John Topping, Mark Brown, Jordan Chetcuti, Joachim R. de Miranda, Francesco Nazzi, Peter Neumann, Robert J. Paxton, Maj Rundlöf, Jane C. Stout	Science	371 (6532)	897	2021	Yes	8
4	1	10.1016/j.chemosphere.2021.130134	Pesticide risk assessment in honeybees: Toward the use of	Lena Barascou, Jean-Luc Brunet, Luc	Chemosphere	276	130134	2021	Yes	10

			behavioral and reproductive performances as assessment endpoints	Belzunces, Axel Decourtye, Mickael Henry , Julie Fourrier, Yves Le Conte, Cédric Alaux						
5	1	10.1016/j.scitotenv.2021.146084	Sulfoxaflor insecticide and azoxystrobin fungicide have no major impact on honeybees in a realistic-exposure semi-field experiment	Giovanni Tamburin, Dimitry Wintermantel, Matthew J Allan, Robin R Dean, Anina Knauer, Matthias Albrecht, Alexandra-Maria Klein	Science of the Total Environment	778	146084	2021	Yes	7
6	1	10.3897/oneeco.6.e63653	Monitoring bee health in European agro-ecosystems using wing morphology and fat bodies	Vanderplanck M., Michez D., Albrecht M., Attridge E., Babin A., Bottero I., Breeze T., Brown M., Chauzat M.-P., Cini E., Costa C., De la Rua P., de Miranda J., Di Prisco G., Dominik C., Dzul D., Fiordaliso W., Gennaux S., Ghisbain G., Hodge S., Klein A.-M., Knapp J., Knauer A., Laurent M., Lefebvre V., Mänd M., Martinet B., Martinez-Lopez V., Medrzycki P., Pereira Peixoto M. H., Potts S., Przybyla K., Raimets R., Rundlöf M., Schweiger O.,	One Ecosystem	6	e63653	2021	Yes	1, 2

				Senapathi D., Serrano J., Stout J., Tamburini G., Toktas Y., Gérard G.						
7	1	10.1016/j.scitotenv.2021.148680	Sulfoxaflor and nutritional deficiency synergistically reduce survival and fecundity in bumblebees	Linguadoca, A., Rizzi, C., Villa, S., Brown, M.J.F.	Science of The Total Environment	795	148680	2021	Yes	3, 5
8	1	10.26786/1920-7603(2021)628	Taxon-specific temporal shifts in pollinating insects in mass-flowering crops and field margins in Ireland	Bottero, I., Hodge, S., & Stout, J.	Journal of Pollination Ecology	28	90–107	2021	Yes	1
9	1	10.1016/j.talanta.2021.122721	Miniaturized multiresidue method for determination of 267 pesticides, their metabolites and polychlorinated biphenyls in low mass beebread samples by liquid and gas chromatography coupled with tandem mass spectrometry	Kiljanek T., Małysiak M., Niewiadowska A., Posyniak A.	Talanta	235	122721	2021	Yes	2
10	1	10.3897/arphaprep rints.e72231	PoshBee: Pan-European Assessment, Monitoring, and Mitigation of Stressors on the Health of Bees	Brown M, Breeze T, Bulet P, Chauzat M-P, Demirova I, de Miranda J, Klein A-M, Mand M, Metodiev T, Michez D, Nazzi F, Neumann P, Paxton R, Potts S, Stout J, Turney G, Yañez O	RIO Journal	N/A	N/A	2021	Yes	1-12
11	1	10.1098/rsos.210818	Pollen nutrition fosters honeybee tolerance to pesticides	Barascou, L., Sene, D., Barraud, A., Michez, D., Lefebvre, V., Medrzycki, P., Di Prisco, G., Strobl, V.,	Royal Society Open Science	8 (9)	210818	2021	Yes	5

				Yañez, O., Neumann, P., Le Conte, Y., Alaux, C.						
12	1	10.1016/j.scitotenv.2021.150351	Delayed effects of a neurotoxic pesticide dose on honeybee foraging activity	Barascou, L., Requier, F., Sené, D., Crauser, D., Le Conte, Y., Alaux, C.	Science of the Total Environment	805	150351	2021	Yes	3
13	1	10.1038/s41598-021-00919-x	Co-formulant in a commercial fungicide product causes lethal and sub-lethal effects in bumble bees	Edward A. Straw; Mark J. F. Brown	Scientific Reports	11	21653	2021	Yes	6
14	1	10.7717/peerj.12486	No evidence of effects or interaction between the widely used herbicide, glyphosate, and a common parasite in bumble bees	Straw EA, Brown MJF.	PeerJ	9	e12486	2021	Yes	6
15	1	10.1016/j.envint.2021.106813	Fungicide and insecticide exposure adversely impacts bumblebees and pollination services under semi-field conditions	Tamburini, G., Pereira-Peixoto, M-H., Borth, J., Lotz, S., Wintermantel, D., Allan, M. J., Dean, R., Schwarz, J. M., Knauer, A., Albrecht, M., Klein, A-M.	Environment International	157	106813	2021	Yes	7
16	1	10.1080/00218839.2021.2018107	An integrated system for field studies on honey bees	Allan, M.J., Dean, R.R.	Journal of Apicultural Research	31	317-319	2022	Yes	7
17	1	10.1002/pmic.202100224	Molecular histoproteomy by MALDI mass spectrometry imaging to uncover markers of the impact of Nosema on Apis mellifera	Houdelet, C., Arafah, K., Bocquet, M., Bulet, P.	Proteomics	22(9)	804-817	2022	Yes	9
18	1	10.1093/ee/nvab139	A Combined LD50 for Agrochemicals and Pathogens	Siviter, H., Matthews, A. J., Brown, M. J.	Environmental Entomology	51 (2)	378–384	2022	Yes	6

			in Bumblebees (Bombus terrestris [Hymenoptera: Apidae])							
19	1	10.3389/fsufs.2022.824750	Variations in Nutritional Requirements Across Bee Species	Barraud, A., Barascou, L., Lefebvre, V., Sene, D., Le Conte, Y., Alaux, C., Grillenzoni, F-V., Corvucci, F., Serra, G., Costa, C., Maryse Vanderplanck, M., and Michez, D.	Frontiers in Sustainable Food Systems	6	N/A	2022	Yes	5
20	1	10.1098/rspb.2021.2353	'Inert' ingredients are understudied, potentially dangerous to bees and deserve more research attention	Straw Edward A., Thompson Linzi J., Leadbeater Ellouise and Brown Mark J. F.	Proceedings of the Royal Society B	289 (1970)	N/A	2022	Yes	3
21	1	10.1002/ece3.8575	Bee Tracker—an open-source machine learning-based video analysis software for the assessment of nesting and foraging performance of cavity-nesting solitary bees	Knauer, A. C., Gallmann, J., and Albrecht, M	Ecology and Evolution	12 (3)	e8575	2022	Yes	7
22	3		Effects of the pesticides sulfoxaflor and azoxystrobin on the metabolism of the bumble bee (Bombus terrestris L.)	Jürison, M., Pent, K., Karise, R., Mänd, M.	Agronoomia	2022	124-130	2022	Yes	3
23	1	10.1016/j.scitotenv.2022.154450	Flowering resources modulate the sensitivity of bumblebees to a common fungicide	Wintermantel, D., Pereira-Peixoto, M-H., Warth, N., Melcher, K., Faller, M., Feuer, J., Allan, M. J., Dean, R.,	Science of The Total Environment	829	154450	2022	Yes	7

				Tamburini, G., Knauer, A. C., Schwarz, J.M, Albrecht, M., and Klein, AM.						
24	1	10.5061/dryad.1jwstqjx5	No evidence for impaired solitary bee fitness following pre-flowering sulfoxaflor application alone or in combination with a common fungicide in a semi-field experiment.	Schwarz, JM, Knauer, A. C., J. Allan, M. J., Dean, R. R., Ghazoul, J., Tamburini, G., Wintermantel, D., Klein, A-M., and Albrecht, M.	Environment International	164	107252	2022	Yes	7
25	1	10.3389/finsc.2022.864238	The Beneficial Effect of Pollen on Varroa Infested Bees Depends on Its Influence on Behavioral Maturation Genes	Frizzera, D., Ray, A. M., Seffin, E., Zanni, V., Annoscia, D., Grozinger, C. M., Nazzi, F.	Frontiers in Insect Science	2	N/A	2022	Yes	8
26	1	10.1038/s41598-022-12714-3	No effect of dual exposure to sulfoxaflor and a trypanosome parasite on bumblebee olfactory learning	Owen P. Vaughan, Edward A. Straw, Alberto Linguadoca & Mark J. F. Brown	Scientific Reports	12	8611	2022	Yes	6
27	1	10.1016/j.scitotenv.2022.154450	Flowering resources modulate the sensitivity of bumblebees to a common fungicide	Dimitry Wintermantel, Maria-Helena Pereira-Peixoto, Nadja Warth, Kristin Melcher, Michael Faller, Joachim Feuer, Matthew J. Allen, Robin Dean, Giovanni Tamburini, Anina C. Knauer, Janine Schwarz, Matthias Albrecht	Science of The Total Environment	829	154450	2022	Yes	7

				and Alexandra Maria Klein						
28	1	10.1016/j.agee.2022.108107	Impact of crop exposure and agricultural intensification on the phenotypic variation of bees	Maxence Gérard, Emily Baird, Tom Breeze, Christophe Dominik, Denis Michez	Agriculture, Ecosystems & Environment	338	108107	2022	Yes	2
29	1	10.1007/s11356-022-21969-2	Pesticide risk assessment: Honeybee workers are not all equal regarding the risk posed by exposure to pesticides	Lena Barascou, Deborah Sene, Yves Le Conte, Cedric Alaux	Environmental Science and Pollution Research	29	90328–90337	2022	Yes	5
30	1	10.26786/1920-7603(2022)697	Stem-nesting Hymenoptera in Irish farmland: empirical evaluation of artificial trap nests as tools for fundamental research and pollinator conservation	S Hodge, I Bottero, R Dean, S Maher, JC Stout	Journal of Pollination Ecology	32	110–123	2022	Yes	1
31	1	10.3390/su141710549	Design and Planning of a Transdisciplinary Investigation into Farmland Pollinators: Rationale, Co-Design, and Lessons Learned	S Hodge, O Schweiger, A-M Klein, SG Potts, C Costa, M Albrecht, J de Miranda, M Mand, P De la Rúa, M Rundlöf, E Attridge, R Dean, P Bulet, D Michez, RJ Paxton, A Babin, M-P Chauzat, N Cougoule, M Laurent, A-C Martel, L Paris, M-P Rivière, E Dubois, K Arafah, D Askri, SN Voison, T Kiljanek, I Bottero, C Dominik, G Tamburini, MH	Sustainability	14/7	10549	2022	Yes	1

				Pereira-Peixoto, D Wintermantel, TD Breeze, E Cini, D Senapathi, G de Prisco, P Medrzycki, S Hagenbucher, A Knauer, JM Schwarz, R Raimets, V Martínez-López, K Ivarsson, C Hartfield, MJF Brown, JC Stout						
32	1	10.3390/molecules 27175741	Method of Glyphosate, AMPA, and Glufosinate Ammonium Determination in Beebread by Liquid Chromatography—Tandem Mass Spectrometry after Molecularly Imprinted Solid-Phase Extraction	Marta Małysiak, and Tomasz Kiljanek	Molecules	27/17	5741	2022	Yes	2
33	1	10.1038/s41467-022-33405-7	A deeper understanding of system interactions can explain contradictory field results on pesticide impact on honey bees	Dimitri Breda, Davide Frizzera, Giulia Giordano, Elisa Seffin, Virginia Zanni, Desiderato Annoscia, Christopher J. Topping, Franco Blanchini, Francesco Nazzi	Nature Communications	13	5720	2022	Yes	8
34	1	10.1098/rspb.2022.1013	Nutritional stress exacerbates impact of a novel insecticide on solitary bees' behaviour, reproduction and survival	Anina C. Knauer, Cédric Alaux, Matthew J. Allan, Robin R. Dean, Virginie Dievart, Gaëtan Glauser, Tomasz Kiljanek,	Proceedings of the Royal Society B: Biological Sciences	289/1984	20221013	2022	Yes	7

				Denis Michez, Janine M. Schwarz, Giovanni Tamburini, Dimitry Wintermantel, Alexandra Maria Klein and Matthias Albrecht						
35	1	10.1038/s41598-022-22239-4	Intra-specific variation in sensitivity of Bombus terrestris and Osmia bicornis to three pesticides	Alberto Linguadoca, Margret Jürison, Sara Hellström, Edward A. Straw, Peter Šima, Reet Karise, Cecilia Costa, Giorgia Serra, Roberto Colombo, Robert J. Paxton, Marika Mänd & Mark J. F. Brown	Scientific Reports	12	17311	2022	Yes	3
36	1	10.1016/j.ejop.2022.125935	Specific detection and quantification by probe-based real-time PCR of three microsporidia infecting bees: Nosema apis, Nosema ceranae, and Nosema bombi	Aurélie Babin, Frank Schurr, Marie-Pierre Rivière, Marie-Pierre Chauzat, Eric Dubois	European Journal of Protistology	86	125935	2022	Yes	2
37	3		Pesticides sulfoxaflor and azoxystrobin effects on bumblebee (Bombus terrestris) metabolism	Jürison, Margret; Pent, Kaarel; Karise, Reet; Mänd, Marika	Agronomy 2022		124-130	2022	Yes	3
38	1	10.1007/s00442-023-05332-x	Responses in honeybee and bumblebee activity to changes in weather conditions.	Arrian Karbassioon, Jon Yearlsey, Tara Dirilgen, Simon Hodge, Jane C. Stout & Dara A. Stanley	Oecologia	201	689–701	2023	Yes	1
39	1	10.1016/j.indic.2023.100239	Beyond generalists: The Brassicaceae pollen specialist Osmia brevicornis as a	Sara Hellström, Verena Strobl, Lars Straub, Wilhelm H.A.	Environmental and	18	100239	2023	Yes	4

			prospective model organism when exploring pesticide risk to bees	Osterman, Robert J. Paxton, Julia Osterman	Sustainability Indicators					
40	1	10.1038/s41559-023-01990-5	Ecological traits interact with landscape context to determine bees' pesticide risk	Jessica Knapp, Charlie C. Nicholson, Ove Jonsson, Joachim R. de Miranda, Maj Rundlöf	Nature Ecology and Evolution	7	547–556	2023	Yes	1
41	1	10.3390/ijms24054658	Unraveling the Bombus terrestris Hemolymph, an Indicator of the Immune Response to Microbial Infections, through Complementary Mass Spectrometry Approaches	Lorène Bournonville, Sébastien N. Voisin, Dalel Askri, Michel Bocquet and Philippe Bulet	International Journal of Molecular Sciences	24/5	4658	2023	Yes	9
42	1	10.3390/ijms24065384	Parasite and Pesticide Impacts on the Bumblebee (Bombus terrestris) Haemolymph Proteome	Dalel Askri, Edward A. Straw, Karim Arafah, Sébastien N. Voisin, Michel Bocquet, Mark J. F. Brown, and Philippe Bulet	International Journal of Molecular Sciences	24/6	5384	2023	Yes	6,9
43	1	10.1016/j.heliyon.2023.e15244	Building composite indices in the age of big data – Application to honey bee exposure to infectious and parasitic agents	Huyen Ton Nu Nguyet, M., Bougeard S., Babin A., Dubois E., Druesne C., Rivière M.P., Laurent M., Chauzat, M.P.	Heliyon	9/4	e15244	2023	Yes	2
44	1	10.3389/fevo.2023.1128228	Impact of landscape configuration and composition on pollinator communities across different	Irene Bottero, Christophe Dominik, Olivier Schweiger, Marika Mand, Risto Raimets, Alexandra-	Frontiers in Ecology and Evolution	11	e309	2023	Yes	1

			European biogeographic regions	Maria Klein, Giovanni Tamburini, Helena Pereira-Peixoto, Simon Hodge, Eleanor Attridge, Cecilia Costa, Gennaro Di Prisco, Piotr Medrzycki, Pilar De La Rùa, Vicente Martínez López, Daniel Dzul Uuh, Maj Rundlöf, Kjell Ivarsson, Joachim R. de Miranda, Jessica Knapp, Matthias Albrecht, Anina Knauer, Janine M. Schwarz, Simon Potts, Deepa Senapathi, Elena Cini, Mark J. F. Brown, Jane C. Stout						
45	1	10.1016/j.scitotenv.2023.163928	Real-Time Monitoring of Honeybee Colony Daily Activity and Bee Loss Rates Can Highlight the Risk Posed by a Pesticide: The Case of the Neurotoxic Insecticide Sulfoxaflor	Lena Barascou, Ugoline Godeau, Maryline Pioz, Olivier Martin, Deborah Sené, Didier Crauser, Yves Le Conte, Cedric Alaux	Science of The Total Environment	886	163928	2023	Yes	3,7
46	1	Submitted	Pesticide use negatively affects bumble bees across European landscapes	Charlie C. Nicholson, Jessica Knapp, Tomasz Kiljanek, Matthias Albrecht, Marie-Pierre						2

				Chauzat, Cecilia Costa, Pilar de la Rúa, Alexandra-Maria Klein, Marika Mänd, Simon G. Potts, Oliver Schweiger, Irene Bottero, Elena Cini, Joachim R. de Miranda, Gennaro Di Prisco, Christophe Dominik, Simon Hodge, Vera Kaunath, Anina Knauer, Marion Laurent, Vicente Martínez-López, Piotr Medrzycki, Maria Helena Pereira-Peixoto, Risto Raimets, Janine M. Schwarz, Deepa Senapathi, Giovanni Tamburini, Mark J.F. Brown, Jane C. Stout, Maj Rundlöf						
47	1	Submitted	Sulfoxaflor effects depend on the interaction with other pesticides and Nosema ceranae infection in the honey bee (Apis mellifera)	Álvaro Urueña, Nuria Blasco-Lavilla, Pilar De la Rúa	Ecotoxicology and Environmental Safety					6
48	1	Submitted	Neither sulfoxaflor, Crithidia bombi, nor their combination impact pollination services or colony development in bumble bees	Ed Straw*, Elena Cini*, Harriet Gold, Alberto Linguadoca, Chloe Mayne, Joris Rockx, Mark Brown, Michael Garrat,	Scientific Reports				Yes	6

				Simon Potts, Deepa Senapathi						
49	1	Accepted	Global taxonomic, functional, and phylogenetic diversity of bees in apple orchards	Leclercq N, Marschall L, Weekers T, Ascher JS, Basu P, Benda D, Bevk D, Bhattacharya R, Bogusch P, Bontšutšnaja A, Bortolotti L, Cabirol N, Calderón-Uraga E, Carvalho R, Castro S, Chatterjee S, De la Cruz-Alquicira M, de Miranda JR, Dirilgen T, Dorchin A, Dorji K, Drepper B, Flaminio S, Gailis J, Galloni M, Gaspar H, Gikungu MW, Hatteland BA, Hinojosa-Díaz A, Hostinská L, Howlett BG, Hung K-LJ, Hutchinson L, Jesus RO, Karklina N, Khan MS, Loureiro J, Men X, Nikolic P, Normandin E, Osterman J, Ouyang F, Oygarden AS, Ozolina-Pole L, Ozols N, Parra-Saldivar A, Paxton RJ, Pitts-Singer T, Poveda K, Prendergast K, Quaranta M, Read SFJ, Reinhardt S,	Science of the Total Environment				Yes	1

				Rojas-Oropeza M, Ruíz C, Rundlöf M, Sandberg C, Sgolastra F, Shah SF, Shebl MA, Soon V, Stanley DA, Straka J, Theodorou P, Tobajas E, Vaca-Uríbe JL, Vera A, Villagra C, Williams M-K, Wolowski M, Wood TJ, Yan Z, Zhang Q, Vereecken NJ						
50	1	In preparation	Perspectives on (modelling) bee health and resilience	Joachim de Miranda, Maj Rundlöf, Francesco Nazzi					Yes	8
51	1	In preparation	A blood test to monitor bee health in the natural environment in two-mass flowering crops by MALDI BeeTyping mass spectrometry	Dalel Askri, Mathilde Pottier, Karim Arafah, Sébastien N. Voisin, Simon Hodge, Jane Stout, Christophe Dominik, Oliver Schweiger, Giovanni Tamburini, Maria Helena Pereira-Peixoto, Vicente Martínez López, Pilar de la Rúa, Elena Cini, Simon G. Potts, Janine M. Schwarz, Anina Knauer, Matthias Albrecht, Risto Raimets, Reet Karise, Gennaro di						1-9

				Prisco, kjell Ivarsson, Jessica Knapp, Maj Rundlöf, Michel Bocquet, and Philippe Bulet						
52	1	In preparation	Monitoring bee health in natural environment in two-mass flowering crops by blood test using MALDI BeeTyping® mass spectrometry	Dalel Askri, Mathilde Pottier, Karim Arafah, Sébastien N. Voisin, Michel Bocquet and Philippe Bulet						9
53	1	In preparation	Interactions of different pesticides and N. ceranae infection in Apis mellifera.	Álvaro Urueña, Nuria Blasco-Lavilla, Pilar De la Rúa						6
54	1	In preparation	Interactions of different pesticides and N. ceranae infection in Apis mellifera.	Janine Melanie Schwarz, Anina C. Knauer, Matthias Albrecht, Alexandre Barraud, Léna Barascou, Denis Michez, Cédric Alaux, Matthias Albrecht						5
55	1	In preparation	Fungicide impairs solitary bee nest recognition and foraging performance but not pollination services in a semi-field study	Janine Melanie Schwarz, Anina C. Knauer, Matthew J. Allan, Robin R. Dean, Jaboury Ghazoul; Giovanni Tamburini, Dimitry Wintermantel, Alexandra-Maria Klein, Matthias Albrecht						7

56	1	In preparation	No evidence that soil-mediated exposure to cyantraniliprole alters the overwintering success of bumblebees (Bombus terrestris ssp. audax)	Alberto Linguadoca, Morgan Morrison, Luca Menaballi, Peter Šima, Mark J. F. Brown						3
57	1	In preparation	Formal Model for a complex agent-based model of laboratory bumble bees	Jordan Chetcuti, Jane C. Stout, Mark J.F. Brown, Christopher J. Topping						8
58	1	In preparation	Diptera collected from commercial Bombus terrestris colonies placed out in Irish farmland	Simon Hodge, Irene Bottero, David Brice, Mark Welch, Jane C. Stout						1
59	1	In preparation	Emerging threats and opportunities to managed bee species in European agricultural systems - A Horizon Scan	Bryony K. Willcox, Simon G. Potts, Mark J.F. Brown, Anne Alix, Yahya Al Naggar, Marie-Pierre Chauzat, Cecilia Costa, Antoine Gekière, Chris Hartfield, Fani Hatjina, Jessica Knapp, Vicente Martínez-López, Christian Maus, Teodor Metodiev, Francesco Nazzi, Julia Osterman, Risto Raimets, Agnes Rortais, Verena Strobl, Annette Van Oystaeyen, Dimitry Wintermantel, Nikol						10

				Yovcheva and Deepa Senapathi						
60	1	In preparation	Modelling dynamic pesticide concentrations in multiple environmental compartments at landscape scales in ALMaSS	Trine Poulsen, Xiaodong Duan, Chris J. Topping						8
61	1	In preparation	Multi-disciplinary projects are needed for a holistic assessment of the exposure and effects of novel pesticides on bees	Chauzat MP; S. Hellström ; D. Askri ; Sanson C; Druesne C; Laurent M; Paxton R						2
62	1	In preparation	Distribution of infectious and parasitic agents among three sentinel bee species across European agricultural landscapes	Aurélie Babin, Frank Schurr, Sabine Delannoy, Patrick Fach, Minh Huyen Ton Nu Nguyet, Stéphanie Bougeard, Joachim R. de Miranda, Maj Rundlöf, Dimitry Wintermantel, Matthias Albrecht, Eleanor Attridge, Irene Bottero, Elena Cini, Cecilia Costa, Pilar De la Rúa, Gennaro di Prisco, Christophe Dominik, Daniel Dzul, Simon Hodge, Alexandra-Maria Klein, Jessica Knapp, Anina C. Knauer, Marika Mänd, Vicente Martinez-Lopez, Piotr						2

				Medrzycki, Maria Helena Pereira Peixoto, Simon G. Potts, Risto Raimets, Oliver Schweiger, Deepa Senapathi, José Serrano, Jane C. Stout, Giovanni Tamburini, Mark J. F. Brown, Marion Laurent, Marie-Pierre Rivière, Marie-Pierre Chauzat, Eric Dubois						
63	1	In preparation	Development and validation of two multiresidue methods for the determination of pesticides in nectar collected by honey bees and bumble bees	Anne-Claire Martel, Nathalie Pierotti, Elodie Bray						2
64	1	In preparation	Most effective policy and practice responses to the multiple stressor effects on bees	Bryony K. Willcox, Deepa Senapathi, Mark J.F. Brown, Anne Alix, Matthew Allen, Katarzyna Biala, Tom D. Breeze, Pilar de la Rua, Michael P. D. Garratt, Konstantin Gospodinov, Chris Hartfield, Kjell Ivarsson, Christian Maus, David McDowell, Denis Michez, Paulo Mielgo, Francesco Nazzi, Peter						10

				Neumann, Carmen Padurean, Robert Paxton, Jeff Pettis, Jens Pistorius, Jane Stout, Tom Strobl, Annette Van Oystaeyen and Simon G. Potts						
65	1	In preparation	The interaction between Paenibacillus larvae and three classes of agricultural pesticides yields mostly additive effects on both mortality and immune gene expression in Apis mellifera larvae	Piero Onorati, Anna Nilsson, Verena Strobl, Peter Neumann, Eva Forsgren, Joachim R. de Miranda					Yes	8
66	1	In preparation	POSHBEE efter 5 år: Resultat och slutsatser av ett mycket framgångsrik europeiskt forskningsprojekt om bin, hälsa och växtskyddsmedel	Joachim de Miranda, Kjell Ivarsson, Maj Rundlöf					Yes	1-12