SCIENTIFIC NETWORK FOR RISK ASSESMENT IN PLANT HEALTH
Minutes of the 20th meeting

05-06-07 December 2023
14:00-18:00 / 09:00-18:00 / 09:00-13:00
Minutes agreed on 17 May 2024

Location: EFSA - Parma Board Room/Webconference

Attendees:

- o   Network Participants:

Country	Name
Austria	Head of Risk Assessment - Austrian Agency for Health and Food Safety - AGES
Belgium	Federal Public Health Service of Public Health, Food Chain Safety and Environment Federal Agency for the Safety of the Food Chain Control Policy
Bulgaria	Risk Assessment Center on Food Chain, Ministry of Agriculture
Denmark	Ministry of Food, Agriculture and Fisheries - The Danish AgricolturalAgency Department for Plants & Biosecurity
Estonia	Agriculture and Food Board
Finland	Finnish Food Authority
France	French Agency for Food, Environmental and Occupational Health & Safety (ANSES)
Germany	Julius Kühn-Institut, Federal Research Centre for Cultivated Plants (JKI)
Hungary	Apology
Ireland	Department of Agriculture, Food and Marine
Latvia	State Plant Protection Service
Lithuania	State Plant Service Division - Ministry of Agriculture
Netherlands	Netherlands Food and Consumer Product Safety Authority (NVWA)
Norway	Norwegian Scientific Committee for Food Safety (VKM)
Poland	Institute of Plant Protection - National Research Institue
Portugal	Direcção Geral de Agricultura e Desenvolvimento Rural
Slovak Republic	National Agriculture and Food Centre – Research Institute of Plant Production
Slovenia	Ministry of Agriculture, Forestry and Food, Administration for Food Safety, Veterinary Sector and Plant Protection
Spain	SG de Sanidad e Higiene Vegetal y Forest
Sweden	Swedish University of Agricultural Science

- o   Observers:
  Switzerland: Federal Office for Agriculture (FOAG)

Serbia: Institute of Phytomedicine, Faculty of Agriculture, University of Belgrade; Faculty of Agriculture, University of Belgrade

Albania: Tirana Agriculture University; National Veterinary and Plant Protection Authority

Kosovo: Food and Veterinary Agency of Kosovo

Turkiye: Ministry of Agriculture and Forestry

Montenegro: Administration for Food safety, Veterinary and Phytosanitary affairs

o   Hearing Experts:
Claude Bragard; Giovanni Nicola Bubbici; Yara El Khouri; Massimo Faccoli; Denis Kutnjak; Matteo Marchioro; Cindy Morris; Jonathan Yuen; Marie Verhaegen.

o   European Commission/Other EU Agencies representatives:

Representative of the European Commission

o   EFSA:
PLANTS Unit: 18 staff members of the PLANTS Unit

MESE Unit: 1 staff member of the MESE Unit

KNOW Unit: 1 staff member of the KNOW Unit

1. Welcome and apologies for absence

The Chair warmly welcomed all participants. Apologies were received from Olivier Wilmart, Francesco Di Serio. Housekeeping rules were presented for participation onsite and online.

2. Adoption of agenda

The agenda was presented, no items were raised therefore the agenda was adopted without changes.

3. Report on agreement and publication of the minutes of the 19th meeting of the Network on Plant Health Risk Assessment held on 14-15 June 2023 at EFSA, Parma (Italy)EFSA.

The report on agreement and publication of the minutes of the 19th meeting of the Network on Plant Health Risk Assessment was presented.

4. Plant health risk assessment

4.1 Commodity risk assessment for High Risk Plants: an update

Ciro Gardi (EFSA) provided an update on commodity risk assessment for high-risk plants. It covered the activities of the three working groups dealing with ornamental, forest, and agricultural plants.

For ornamental plants, the work presented regarded dossiers from the UK for plants of *Crategus monogyna*, *Cornus alba* and *Cornus sanguinea*. The forest plants working group reviewed dossiers from the UK and Ukraine, publishing assessments for *Corylus avellana* and is working on various other species such as *Ligustrum*, *Betula*, and *Tilia* species. The agricultural plants working group is currently dealing with dossiers from Moldova and United Kingdom, of *Prunus* species. In total, the activity analysed almost 20,000 pests, resulting in the identification of 21 actionable pests for the European Union, with some already regulated and others requiring further categorisation and pest risk assessment.

4.2 Commodity risk assessment for Petunia and Calibrachoa plants from Guatemala: an update

Ciro Gardi (EFSA) presented an update on the derogation requests for Petunia and Calibrachoa. The evaluation of the dossier from Guatemala considered the production cycle, risk mitigation measures, and strict hygienic standards in place at the nurseries. The presentation outlined the methodology for identifying actionable pests, highlighting the evaluation of pests potentially affecting Petunia and Calibrachoa. In the case of Guatemala, 60% of the 466 pests evaluated were deemed likely to affect these plants, mainly viruses. The presentation concluded with an overview of the next steps, including the pending adoption of the Guatemala opinion, advancements in the Kenya dossier, and upcoming assessment of Costa Rica and Uganda dossiers.

4.3 Commodity risk assessment for derogation requests to EU plant health law provisions for forest plants: an update

Franz Streissl (EFSA) presented two derogation requests dealt with by the WG High risk plants II. The first request relates to the import of maple veneer sheets from Canada. The systems approach proposed by the applicant relies on the different steps during the veneer production process i.e. bark removal, steam/hot water treatment of logs, cutting in thin sheets and high temperature drying of veneer sheets. The evaluation focuses on assessing limits for pest survival in particular for high temperatures during the final drying of veeneer sheets. Clarification questions have been sent to the applicant. Responses are expected by end of January.

The second request concerns conifer wood chips from the US, aiming to ensure freedom from EU quarantine pests with a specific emphasis on the nematode *Bursaphelenchus xylophilus* and its vector *Monochamus*. The chip production process involves debarking, cutting and fumigation with sulfuric fluoride before export. The working group is actively collecting data, conducting expert knowledge elicitation, and seeking clarification on various aspects from the applicant, including wood chip size and concentration measurements. Responses were expected by end of January. Network members aware of experts on fumigation were kindly asked to provide contact information to EFSA.

4.4 Pest categorisation of insects and mites: an update

Virág Kertész (EFSA) presented an update on the work of the Arthropods pest categorisation working group, specifically focusing on pest categorisations related to insects and mites. In 2023, the emphasis was on actionable pests identified in commodity risk assessments. The presentation covered various pests, including *Euzophera semifuneralis*, *Pochazia shantungensis*, *Didesmococcus unifasciatus, Mimela testaceipes, Lepidosaphes species, Diaprepes abbreviatus, Dendrolimus punctatus, Malacosoma parallela*, and *Solenopsis invicta*.

The detailed discussion on *Pochazia shantungensis* highlighted its polyphagous nature, potential economic impacts, and its spread towards Europe. The conclusion of the pest

categorisation emphasized its potential as a union quarantine pest, with specific attention to entry pathways and countries at risk.

The presentation also addressed the pest categorisation of *Solenopsis invicta* (fire ant) providing updates on recent findings. The potential global distribution of the ant and its environmental and economic impacts, as well as human health concerns were discussed. The presentation concluded that *Solenopsis invicta* met the criteria for consideration as a potential union quarantine pest, and subsequent scientific literature and media reports revealed its establishment in Sicily, Italy.

4.5 Pest categorisation of plant pathogens: an update

Marco Pautasso (EFSA) provided an updated from the Plant pathogens pest categorisation working group, tackling the categorisation of nematodes, viruses/viroids, fungi, and bacteria. An overview of the pest categorisations conducted in 2023 was given. Key pathogens, including *Coniella granati* affecting pomegranates, were discussed. Most pathogens were globally widespread, but with a restricted distribution or absent in the EU.

The presentation covered climate suitability, global and EU distribution, and spread pathways. Potential impacts on crop production were discussed. Conclusions were drawn based on criteria for potential union quarantine pests. Ongoing categorisations were mentioned, and their likely conclusions were described .

4.6 Quantitative pest risk assessment of *Leucinodes orbonalis*

Ewelina Czwienczek (EFSA) presented the quantitative pest risk assessment of *Leucinodes orbonalis*. Notably, taxonomic uncertainties regarding the African species *Leucinodes pseudoorbonalis* were raised. The detailed description of *Leucinodes orbonalis* highlighted its classification as an eggplant, fruit, and shoot borer, with an exclusive diet comprising solanaceous hosts. The assessment's methodology encompassed quantitative risk assessment techniques, including interception data, pathway modelling, climate suitability analysis, and expert knowledge elicitation (EKE).

In terms of entry, establishment, transfer, spread, and impact, it was identified *Solanum melongena* and *Solanum torvum* as primary interception hosts in Europe. Various scenarios based on imports were explored, with climate suitability models predicting potential areas for the pest's establishment in Europe. It was also addressed transfer and spread possibilities, considering larvae development in discarded eggplants and escapes from waste in commercial and household settings. The impact analysis focused on solanaceous plants, including eggplants, potatoes, and tomatoes, across different regions. The overall conclusion emphasized *Leucinodes orbonalis* as an oligophagous pest with specific entry pathways, potential climate-matched establishment zones, and anticipated impacts on solanaceous host plants, particularly eggplants.

4.7 Quantitative pest risk assessment: probability of introduction of *Thaumatotibia leucotreta* (False codling moth) with cut roses

Giuseppe Stancanelli and Olaf Mosbach-Schulz (EFSA) presented the quantitative pest risk assessment on the probability of introduction of the false codling moth (*Thaumatotibia leucotreta*) through import of cut roses. The presentation covered the analysis of the probability of introduction with cut roses imported from countries where the pest is present. It was discussed the suitability of the European climates for *Thaumatotibia leucotreta*, using the Koppen-Geiger climate classification and a model. The analysis revealed a significant portion of southern Europe climatically suitable for the pest. A detailed pathway model was presented, including importation, transportation, storage, retail, and waste management phases. It was analysed the likelihood of the pest escaping during these phases, with a key

factor being the time between home disposal and waste treatment. The waste management model considered commercial and household waste, including private compost, with survival rates for different treatment methods.

It was highlighted that the risk for establishment in Europe depends on factors like flowers consumption, climatic suitability, waste treatment, and seasonality. It was emphasized the need for more data on the ecology, biology of the pest, infestation in cut roses, effectiveness of import inspection, and waste management practices.

4.8 Update on climate suitability

Andrea Maiorano (EFSA) presented the work on climate suitability and its evolution since the last presentation done at the previous Network meeting in June 2023. Dejana Golic (EFSA) provided an overview of the workflow, which begins with a systematic literature search, followed by data extraction and climate matching using the Koppen-Geiger classification. For pest categorisation, the main outputs include global distribution maps for the pests and the host list, while quantitative pest risk assessments (QPRA) consider additional factors such as pest biology, impact, spread, and control methods. Alex Gobbi (EFSA) presented two case studies, on *Solenopsis invicta* (fire ant) and on *Diaprepes abbreviatus*, highlighting the agility to quickly update distribution maps in response to new pest detections or working group needs. Eugenio Rossi [CREA (Italy) - art 36 Tasking Grant supporting EFSA climate suitability] summarized the activities within the QPRA of *Leucinodes orbonalis* discussing the methods used for the climate suitability: Koppen-Geiger, degree days, number of generations, CLIMEX analysis, and a species distribution model.

The group concluded highlighting their collaborations, external expert contributors, and achievements in 2023. Together they delivered 35 pest categorisations and four QRPA, resulting in over 11,000 papers reviewed, 9,000 pest observations documented, and the production of more than 200 maps.

4.9 Introduction to the new mandate on developing protocols for emergency authorisations of plant protection products

Franz Streissl (EFSA) provided an update on the development of protocols for assessing emergency authorizations of plant protection products. It was highlighted that this mandate requires the creation of fit-for-purpose protocols aligned with Article 53 of the Pesticides Regulation and the Farm to Fork and biodiversity strategies. Protocols for insecticides are scheduled for completion by May 2025, fungicides and bactericides by March 2026, and the remaining by January 2027.

It was emphasized that Article 53 permits short-term authorisations for special circumstances. Key aspects of protocol development include a focus on non-chemical methods, avoidance of repeated authorisations for the same pest and crop combination, and the demand for scientific justification in absence of reasonable alternatives.

The work plan comprises preparatory work, data collection on alternatives, evaluation, protocol development, workshops, public consultations, training, and case studies. Challenges in the process include defining "reasonable" alternatives, establishing criteria for evaluation, determining an acceptable duration, and addressing the comparability of working environments.

4.10 Demonstration of horizon scanning dashboard

Sara Tramontini (EFSA) presented the new Horizon Scanning Dashboard, comprising three sections: Emerging pests, Priority pests, and a Newsletter Search Engine. The tool aims to engage both experts and the general public in understanding plant health threats. Sara provided insights into the horizon scanning process, highlighting its evolution from media to

scientific publications, with a monthly newsletter filtering relevant plant pest publications. The dashboard allows users to explore emerging pests on a map, analyse traffic for priority pests, and search newsletters for specific pest-related information. Sara encouraged feedback for potential improvements as it is planned an update in the coming year. The connection between the panel's activity and horizon scanning was established, highlighting the interaction between the two teams.

5. ONE Health

5.1 What is the added value of ONE Health for plant health?

Cindy Morris (INRAE, France) presented the concept of One Health, highlighting its significance in understanding disease epidemiology and fostering collaboration across various disciplines for human health, animals, and the environment. The presentation touched upon the historical context of One Health. It was noted that One Health initiatives often overlook plant diseases.

The presentation highlighted that plant health could benefit from integrating specific One Health concepts. Four key concepts for understanding plant disease epidemiology and management were presented: Reservoirs (full cycles of plant pathogens); Virulence Factors as Environmental Adaptations; Predictive Framework for Microbial Risks; and Spillover Between Reservoirs.

5.2 PLANTIBIO: Antimicrobial use and resistance in plant pathogenic bacteria

Marie Verhaegen (UC Louvain, Belgium) presented the PLANTIBIO project funded by EFSA, focusing on antibiotic resistance in plant pathogenic bacteria. The project aimed to address the lack of data on antibiotic use in plant agriculture and its potential contribution to global antibiotic resistance. The presentation outlined the project's objectives, including antibiotic use in plant protection, associated resistance risks, and alternative solutions. The PICO model and CYMAGO tool were employed to search and appraise the literature. Findings revealed streptomycin as the most documented antibiotic applied in plant protection, with 14 countries officially using antibiotics in crops. The potential for horizontal gene transfer in antibiotic resistance was discussed. The presentation emphasized the project's commitment to disseminating results through publications and event presentations, contributing valuable insights to the One Health and plant pathology communities.

5.3 Advances in high-throughput sequencing give new opportunities for virus detection toward a ONE Health approach

Dennis Kutnjak (National Institute of Biology, Slovenia), discussed environmental virology, covering traditional methods and the latest state-of-the-art approaches. He addressed the spread of stable viruses in water, highlighted challenges in detecting waterborne viruses, and discussed the efficiency of tests. The presentation included a summary of High-Throughput Sequencing (HTS) utilised for virus detection with a One Health approach, presenting three studies conducted in Slovenia. A project, within the scope of One Health, focused on viruses in wastewater, exploring their impacts on plants and humans, emphasizing applications in public health and pandemic preparedness. The detection of the Tomato brown rugose virus in drain water from infected greenhouses was also discussed. The second example involved using HTS to define the virome of tomatoes. Statistics of virus detection in tomatoes and weeds were presented, revealing a new tobamovirus infecting *Plantago major*. The analysis extended beyond plants to include water, providing a better understanding of the virus wider spread. The third example explored the search for new

tobamoviruses in global databases. The workflow was presented along with some results about the newly discovered tobamovirus.

6. Data

6.1 *Xylella* host plants database update November 2023

Alice Delbianco (EFSA) provided an update on the *Xylella* host plants database, detailing the timeline based on EU Commission mandates, and the methodology, including data extraction, analysis, and reporting. Version 8.0 of the database revealed 12 new host plants in Portugal, and the distribution per species was presented. In Version 9.0, 7 new host plants were identified in natural conditions. Statistics showed 120 plants identified, with 80% from natural infection and 20% artificial, primarily reported from the EU, notably Portugal. The presentation also highlighted the identification of *Xylella taiwanensis*, reported only in Taiwan in *Pyrus pyrifolia* (Chinese pear). The database is updated every six months and is publicly available on the EFSA website.

6.2 An update on the EU apple pests database to support EU negotiations with Third Countries

Agata Kaczmarek (EFSA) provided an overview of the EFSA Apple pest database, beginning with background information on the three mandates received from the Commission. The presentation covered activities related to each mandate, emphasizing overall project objectives, including supporting Member States in accessing third countries' markets and establishing world standards for plant commodities. Yara El Khoury (CNR, Italy – art. 36 Tasking Grant supporting the EU apple pests database) then presented the data collection workflow, highlighting the presentation of data in a new dashboard at the end of the mandate. Graphs illustrated the number of references per pest, with examples for *Helicoverpa Armigera* and *Colletotrichum clavatum* geographic occurrences in China and India. Agata Kaczmarek discussed the possibilities of transition to different technology and the incorporation of *Malus domestica* pest lists from third countries. The summary emphasized the systematic data collection, interactive involvement of EU/MS, and access to the platform by Third Countries upon agreement with the Commission.

6.3 Scolytinae database in support of pest group categorisation: an update

Massimo Faccoli (Università di Padova, Italy – art 36 Tasking Grant supporting the pest categorisation for non-EU Scolytinae of non-coniferous hosts) introduced the project on data collection focused on non-EU Scolytinae of broadleaved trees, emphasizing the three factors influencing biological invasions: entry, establishment, and potential for causing damage. The presentation covered the project timeline and showcased the database developed by the Università di Padova - DAFNAE department, with an illustrative example of *Pityophthorus juglandis*. The main achievements on data collection on non-EU Scolytinae for both conifers and broadleaved trees were highlighted.

6.4 Research to reduce risk assessment uncertainties: final results of an Art 36 project on climate suitability of Tunisia and Mediterranean countries for Citrus Black Spot

Antonio Vincent (IVIA, Spain – art 36 Grant) presented the final results of the Art.36 Project, which focused on reducing risk assessment uncertainty related to the suitability of Mediterranean citrus production areas for *Phyllosticta citricarpa*. The Citrus Black Spot (CBS) outbreak in Tunisia was described, emphasizing its distribution and its varying incidence levels.

The research consortium comprises three EU institutions [IVIA (ES), ANSES (FR) and NIB (SI)] and the ISA CM research institute in Tunisia. The main objectives of the project included collection of epidemiologic data, on-site training, capacity building to better understand the suitability of CBS in the Mediterranean basin. The process of collecting DNA samples and a summary of the samples were presented.

The biological lifecycle of the pest, covering population dynamics and sexual and asexual reproduction, was presented. More than 200 strains collected so far in Tunisia were all identified as *Phyllosticta citricarpa*.

6.5 Artificial intelligence for evidence management

Ermanno Cavalli (EFSA) presented the role of Artificial Intelligence (AI) in EFSA evidence management, focusing on the EFSA SPIDO project and EFSA Strategy 20278 timeline. The vision for 2027 aligns with Commission goals and emphasizes a human-centric approach. Collaboration with organizations such as JRC, OECD, and EMA was noted, along with a roadmap for AI actions in evidence management for risk assessment, ensuring alignment with the EU AI Act. The presentation regarded AI on ontology, automation in systematic reviews and in critical appraisal. The use of AI in EFSA's scientific outputs was highlighted with relevant statistics.

7. Mini-workshop with discussion sessions (breakout sessions) for feedback and suggestions to EFSA on plant health risk assessment

7.1 Introduction to workshop, presentation of breakout groups, topics and participants

Giuseppe Stancanelli (EFSA) explained the workshop's objectives, namely, to collect feedback from Network on how to improve, innovate and make a more fit-for-purpose risk assessment in plant health. The aim was also to explore how to create better interaction and collaboration between EFSA and member states. The decision to organise this mini-workshop was determined by the upcoming completion in March 2024 of the ongoing EC SANTE mandate on quantitative pest risk assessment and pest categorisation. The current mandate will only continue until 2026 for the categorisation of actionable plant pests identified by EFSA through the commodity risk assessment of high-risk plants. Also, a new Plant Health Panel is set to start in July 2024, lasting for five years until June 2029. During this phase of transition to the installation of the new Panel and the initiation of new mandates, EFSA would like to collect feedback and suggestions from Network on its various activities on plant health risk assessment: pest categorisation, quantitative pest risk assessment, climate suitability, commodity risk assessment and environmental data management, science communication, visualization tools applied and research to fill up key knowledge gaps/risk assessment uncertainties.

7.2 Breakout sessions

Giuseppe Stancanelli (EFSA) explained the plan for the breakout sessions. The online participants would remain in the current room connected through the same link and attending the breakout session 2. Meanwhile, network members, observers, and some EFSA staff present onsite would meet in meeting room M14 for an in-person breakout session 1. After the coffee break, a rapporteur for each group would report back to the plenary session, opening the discussion.

The first breakout session, on **Integration of Artificial Intelligence and Citizen Science in plant health risk assessment,** will be chaired by Ermanno Cavalli (EFSA) with rapporteurs Johanna Boberg (Sweden) and Alex Gobbi (EFSA), with support from João Cavalheiro (EFSA).

The second session held online on **Fitness for purpose of conclusions and interaction with Member States in plant health risk assessment,** will be chaired by Claude Bragard with Sylvia Blümel (Austria) and Giuseppe Stancanelli (EFSA) as rapporteurs, with support from Emanuela Tacci (EFSA).

7.2.1 Breakout session 1 (participants at EFSA)

Integration of Artificial Intelligence and Citizen Science in plant health risk assessment (participants at EFSA – Meeting Room MTG SEAT 00/M14)

The discussion highlighted the positive experience of citizen science in data collection. The use of general databases and quality assessment for species identification were discussed. Concerns were raised about systematic data validation due to resource challenges. Norway's free sample identification service was noted as a positive example. It was discussed the use of AI to scan social media pictures for information.

Regarding the use of AI, the participants expressed no prior experience with it, apart from ChatGPT. It was acknowledged the potential of AI tools in speeding up Pest Risk Assessment (PRA) processes. Suggestions included AI for pre-sorting papers, automating the extraction for modelling purposes and search and analysis of papers in multiple languages.

7.2.2 Breakout session 2

Fitness for purpose of conclusions and interaction with Member States in plant health risk assessment (participants online)

The discussion focused on the pest categorisations, particularly on the conclusions on pest impact of the EFSA's opinions and on issues related to pest distribution within the EU. The session highlighted also the crucial role of diagnostics methods and of the interaction with the EU reference laboratories.

7.3 Wrap up and conclusions from breakout sessions

7.3.1 Report back to plenary from breakout session 1

Despite the overall good experience, quality concerns were raised regarding the use of citizen science, highlighting the importance of proper identification methods and evaluation of reports. The example of Norway's free identification service was commended. The importance of increasing public knowledge and effective communication in citizen science efforts was emphasized.

In the context of AI, potential applications in speeding up risk assessments, pre-sorting papers, and pest categorisation were noted. While acknowledging the potential benefits, concerns about AI's output quality, communication, and redundancy were raised. The need for validation, documentation, and reproducibility in AI applications was stressed. The report concluded with a playful interaction, asking ChatGPT to summarize the citizen science breakout session.

7.3.2 Report back to plenary from breakout session 2

It was emphasized the need for more information on impact of potential EU quarantine pests and various options were discussed, including the application of weight of evidence approach and/or Expert Knowledge Elicitation for pest impact assessment or seeking information from Member States to address uncertainties.

The discussion on pest distribution highlighted the need to enhance the collection of information on "new" pests: in particular, it was suggested to contact MS in advance at the onset of a new mandate to collect information on pest occurrence and impacts from the Member States where a pest already occurs. Also, the importance of closer exchanges between EFSA and the EURLs was highlighted. Challenges regarding changes in taxonomic classification were also acknowledged.

Regarding climate suitability it was suggested to build a repository for all climate suitability assessments of new, emerging and quarantine plant pests, to ease access and use by MSs.

8. Communication of plant health risks

8.1 #PlantHealth4Life campaign: activities & results Year 1; look ahead Year 2

Irene Zanetti (EFSA) provided a comprehensive overview of the #PlantHealth4Life campaign, covering target audiences, key messages, and dissemination efforts. Agata Kaczmarek (EFSA) highlighted the collaborative nature of the campaign, emphasizing scientific input, and the graphical considerations of the campaign. The outreach numbers were presented, and the display of the campaign on Brussels Airlines flights was highlighted. Irene Zanetti discussed additional strategies such as media advertising, programmatic advertising, media relations, and influencer engagement.

The results showed that the campaign exceeded all forecasted KPIs. Future plans include triggering critical thinking, focusing on specific areas, and expanding participation. The call for participation for the second year is open, with new member states joining the initiative.

8.2 Brief update on EFSA participation to international plant health events

Giuseppe Stancanelli (EFSA) provided a brief update on EFSA's participation in key plant health events: the 4th European Conference on *Xylella*, the International Congress of Plant Pathology, and the European Conference on Entomology. The Xylella conference highlighted progress in detection technologies and resistance identification in almond varieties. Giuseppe mentioned changing dynamics in the *Xylella* epidemic in Apulia, emphasizing factors like reduced inoculum and vectors.

EFSA actively participated in the International Congress of Plant Pathology, contributing to sessions on invasive plant diseases, and risk assessment of plant pathogens. The presentation emphasized EFSA's visibility in the scientific community and efforts to raise awareness of plant health and risk assessment. Insights from the European Conference on Entomology (ECE 2023), in topics such as arthropod biodiversity, and climate change's impact on plant health and insects decline were mentioned. The overall message highlighted the importance of EFSA's engagement in international conferences for staying informed, enhancing EFSA's visibility in the field and promoting cooperation.

9. Items proposed by Member States

One item was proposed by Sweden regarding Citizen Science which was included in the breakout session discussion. No other items were raised.

10. Conclusions and next steps, meetings dates and format

Giuseppe Stancanelli (EFSA) expressed satisfaction with the thorough discussion on EFSA activities, presentations, and breakout sessions. It was mentioned that plans for the future included gathering feedback also on other activities (such as quantitative pest risk assessment, climate suitability and commodity risk assessment.

Meeting dates in 2024 were discussed. It was decided to send out a poll to identify the best date for the next network meetings, to ensure MS participation.

Wolfgang Reinert (EC SANTE) expressed gratitude for the organization of the meeting, highlighting its unique format that brings together diverse participants. He made positive remarks on the format, which combines updates on files, general interest topics, and a mini-workshop.

Closing remarks included gratitude for the participants and technical assistance. A big thank you was extended to the retiring colleague from Austria, Sylvia Blümel, along with appreciation for her significant contribution to EFSA's activities.

Annex(s)

Replies to questions:

Questions relating to topic 4.3

Norway asked for clarification about the hot water treatment in the production of maple veneer sheets. The question revolved around the frequency of this treatment.

Franz Streissl explained that hot water treatment is a crucial step in the production process, ensuring logs have the right moisture content for thin slicing. However, he specifies that within the maple production process, the hot water treatment is done only once.

Kosovo inquired whether the hot water treatment can be applied to living plants.

Franz Streissl clarified that the method currently under assessment is exclusively employed for logs and cut wood during the production process.

Hot water treatment is also applied in dormant plants (eg. grapevines) for control of viruses and bacteria in plant propagation material.

Questions relating to topic 4.2

Germany inquired when will the Guatemala dossier be finalised. Regarding Uganda it was asked the reason for delay, considering the general understanding that countries have their dossiers ready for ongoing evaluations.

Ciro Gardi stated that the opinion from Guatemala had the potential to be finalized by the end of the year, as they were waiting for few further clarifications before proceeding with adoption. He explained that the extended timelines were often a result of delayed responses from the applicant countries involved, citing communication challenges.

Germany asked for clarification on the reserve list, seeking information on how pests are added to it and the implications or actions associated with pests on the reserve list.

Ciro Gardi and Giuseppe Stancanelli highlighted that these pests are placed in reserve list due to uncertainties in qualification as actionable. The addition of a pest in the reserve list of a commodity risk assessment triggers its monitoring through the EFSA horizon scanning. If new evidence emerges, the process may lead to horizon scanning ranking and eventual categorisation.

Questions related to topic 4.4

Netherlands raised a concern about the varying levels of evidence considered for pests with economic impacts. It was asked if the PLH panel follows standard criteria and how much evidence is needed to include the economic impact of a given pest.

Virág Kertész explained that the main principle in pest categorisations is to collect enough evidence to make a conclusion, however often there is limited evidence for new, non-regulated pests. It was emphasized that whenever there is uncertainty about impact, it is clearly described in the opinions, and risk managers decide whether to place the pest on the quarantine list.

Guiseppe Stancanelli highlighted the challenge of ranking pests based on impact and the ongoing efforts to depict impact in opinions.

Tobin Robinson (HoU) mentioned collaboration with the Joint Research Centre (JRC) to assess impact at an economic level, acknowledging the difficulty in doing so.

Questions related to topic 4.6

Serbia inquired if there is information on yield losses resulting from pest infestations. The distinction is made that while pest infestation is a concern, it may not necessarily equate to direct yield losses.

Ewelina Czwienczek answered by referring that according to the findings of experts in India, when the pest attacks shoots, the damage is severe, leading to a complete stop in fruit production with no possibility of recovery.

Germany's question concerns the assessment's final outcome regarding whether *Leucinodes orbonalis* qualifies as a Union Quarantine pest. The inquiry is based on the perceived low likelihood of entry, establishment, and significant spread in the EU. The question implies that, given these factors, the assessment likely concludes that *Leucinodes orbonalis* does not qualify as a Union Quarantine pest due to its limited potential impact on the EU.

Ewelina Czwienczek explained that the qualification, whether *Leucinodes orbonalis* is categorised as a Union Quarantine pest or not, was determined in the initial phase of pest categorisation. She indicates that the decision now rests with the Commission, who will review the data and considerations discussed, including the perceived low likelihood of entry, establishment, and spread in the EU, to make the final determination on the pest's qualification.

Questions related to topic 4.7

Netherlands inquired about the estimate of more than 100 mated females of the false codling moth per year in areas where the pest could potentially establish and yet, no reported outbreaks despite the significant number of intercepted roses entering the European Union over the years. It was further highlighted that the pest was only regulated in 2018 in the EU, had not been considered a quarantine pest before that. If the estimate of over 115 interceptions per year was accurate, why there were none or very few outbreaks?

Giuseppe Stancanelli (EFSA) responded suggesting that the many of the potential pest escapes and mating are predicted in areas uncertainty in areas with low climate suitability, thus possibly explaining the absence of established infestations. In addition, Olaf Mosbach-Schulz (EFSA) remarked that the high estimates are linked to the 28-day waste treatment scenario of the model and the uncertainty on the waste management process applied in each NUTS2 area.

Sweden inquired about the climate suitability model, seeking more details.

Andrea Maiorano (EFSA) explained that the model is temperature-based, incorporating information on temperature profiles related to pest reproduction, growth, and development. Olaf Mosbach-Schulz (EFSA) explained the 4 (blue, green, yellow, and red) zones representing different climate suitability levels. For example, countries like France, Hungary, Romania, and Bulgaria (mainly in the blue zone) show a lower climate suitability compared to Southern regions like Andalusia (Spain) or Sicily (Italy).

Questions related to topic 4.8

Netherlands remarked that in some cases a basic scan with Koppen-Geiger could lead to conclude that a pest could establish in Northern countries, however, with more sophisticated model it would only establish in Southern EU countries. The team was asked to elaborate in the use of more complex Koppen-Geiger climate.

Andrea Maiorano explained that the Koppen-Geiger approach is an initial step in understanding pest establishment based on climate. It provides a general idea. In the past, due to time and resource constraints, it was the primary tool for pest categorisation. However, improvement in literature search and collaboration allowed the team to develop additional climate products, such as degree day maps (example given by Alex Gobbi), CLIMEX and SDM.

Questions related to topic 4.9

Netherlands inquired if the project addresses the control of non-regulated pests and incorporates emergency registrations for eradicating quarantine pests.

Tobin Robinson mentioned that the discussion is focused on the exploration of emergency authorizations for currently unauthorized pesticides, with Franz emphasizing the need to assess available options. Giuseppe Stancanelli highlighted the relevance of the question and proposed further investigation into potential distinctions for quarantine pests.

Questions related to topic 5.1

Giuseppe Stancanelli asked Cindy Morris about the potential impact of molecular biology on the risk assessment of exotic pests and pathogens. Cindy emphasized the importance of considering the origin and conditions when studying pathogen emergence, suggesting that some pathogens

might have been present but unnoticed until certain conditions arise. She highlighted the need to explore questions about the microbiome and the assumptions made when pathogens overcome disease resistance, urging researchers to consider the role of natural selection pressures in addition to new arrivals or variants.

Questions related to topic 5.2

Austria inquired about the time period covered in the research.

Marie Verhaegen explained that they aimed for the most updated data; however, the oldest data considered starts in 1995, with the majority being from recent years, including 2023.

Austria expressed interest in understanding if there are trends in antibiotic use and resistance development over time.

The challenge was acknowledged, noting an increase in reports due to more studies being conducted. However, due to the complexity of the topic, an analysis of the evolution of resistance was not conducted.

Questions related to topic 5.3

Claude Bragard (Chair of EFSA PLH Panel) asked Dennis Kutnjak whether during their search for viruses in the environment, they have found European Union (EU) quarantine plant viruses and also about the approach they would take to design a study specifically targeting such viruses. Cindy Morris was asked on how to do that with a lack of data.

Dennis Kutnjak responded that previous studies found tomato brown rugose viruses in rivers in Slovenia through HTS. However, he highlighted the challenge of precisely determining the virus's origin, whether from ongoing outbreaks or wastewater resulting from imported tomato consumption. He suggested using the system as a soft alarm but emphasized the need for more samples to clearly identify the virus's origin.

Cindy Morris recommended focusing on pathogens with missing links in their lifecycle or employing metagenomic approaches to address the lack of data.

Alex Gobbi (EFSA) inquired about the data mining phase and whether there are plans to include other meta-viruses, particularly those produced for bacteriophages. Additionally, he asked if there are intentions to introduce meta-viruses obtained through technologies such as nanopore sequencing, considering the compatibility with Illumina sequences.

Dennis Kutnjak explained that they currently use these tools because it enables searching the complete NCBI database, which contains most publicly available sequencing datasets. This means that they explore all data types, whether it's a metavirus study for a different purpose, or gene expression, or something else. The advantage of this approach is that it may hint at a possible dataset containing, for example, a tobamovirus. They then download and further analyse these datasets. The use of nanopore technology is also included in the same system.

Serbia inquired about specific details regarding the detection frequency, detection limits, number of samples analysed, and positive samples, particularly focusing on Tomato brown rugose and potential future quarantine viruses.

Dennis Kutnjak mentioned that the study analysed over 20 water samples (surface and irrigation water). Approximately one-third of the samples showed the presence of Tomato brown rugose.

Questions related to topic 6.2

Andrea Maiorano (EFSA) inquired about the level of detail in the collection of geographical occurrence data, specifically asking if more detailed information beyond the country level was being gathered.

Yara Elkhouri (CNR Italy) confirmed that they are collecting detailed data, including coordinates, names, and regions at the NUTS 3 and NUTS 2 levels, as well as those in the EFSA catalogue. Andrea expressed interest in having the final version of official region names for sharing.

Andrea Maiorano asked about the use of Power BI.

Luca Belmonte (EFSA) clarified that they plan to use Microsoft tools, including Power BI, for creating dashboards to share results of data collection with the Commission or the public. The choice of tool may evolve based on future requirements and requests received.

Questions related to topic 6.3

Netherlands enquired if the identity of the species is always clear and if the team considers the economic impact.

Massimo Faccoli (University of Padova, Italy) responded that the identity of the species is clear. He mentioned that many species are not thoroughly investigated and are known primarily from a taxonomic perspective, without known economic impacts.

Austria asked about the definition of "native" and "exotic" species with regard to the timeframe, acknowledging the ongoing debate on this issue.

Massimo Faccoli explained that in some cases, defining the status of species as native or exotic is challenging, especially for alien species introduced in Europe and other regions, as obtaining information on their pathways of arrival and dates of introduction is difficult, requiring data collection from open catalogues to reconstruct the history of origin.

Questions related to topic 6.4

Guiseppe Stancanelli inquired about the hypothesis regarding the possible entry pathway for CBS (Citrus Black Spot) in Tunisia, considering the genetic characteristics of the fungal population. He referenced the similarity to findings in the Florida outbreak.

Antonio Vincent responded by emphasizing the importance of examining plant material for potential entry, suggesting a bottleneck effect where only one genotype may establish itself initially. It was mentioned that the comparison of different populations globally to identify the likely origin of the pest.

Questions related to topic 6.5

Claude Bragard asked Ermanno Cavalli if there are existing examples where artificial intelligence has been used to assess evidence of bias in plant health and plant health epidemiology studies.

Ermanno Cavalli responded that they have tested AI in animal studies and expressed openness to collaboration on plant health epidemiological studies. It was mentioned that, theoretically, large language models should be able to provide answers without bias, but he couldn't provide a precise answer at that moment.

Alex Gobbi inquired about the cost-benefit balance and whether it might favour using GPT-3.5 over GPT-4 for certain problems.

Ermanno Cavalli mention that the classifier in the distiller is built on large language models and relies on supervised learning. The classifiers in distiller are described as classical supervised machine learning models. Regarding the comparison between GPT-3.5 and GPT-4, it was noted that while GPT-4 is superior, it also comes with a higher cost.

Questions related to topic 7.3.1

Giuseppe Stancanelli shared information about the Canadian colleagues using citizen science for risk assessment, where data on pest distribution collected by citizens are validated by experts in taxonomy and diagnostics. Stancanelli asked if a similar approach could be suitable for EFSA and the EU.

Sweden expressed agreement, acknowledging the importance of validated data and reports.

Agata Kaczmarek explained that they partly use citizens science and examine user-inserted data, validate it, and compare it with existing data. In cases of uncertainty regarding distribution, input, or association with the commodity of plant species, they involve Horizon Scanning for further data analysis and accumulation.

Giuseppe Stancanelli mentioned a recent case involving a non-EU pest found in a MS. A sample was examined in a natural history museum and photos were shared with experts for validation.

It was highlighted the importance of confirmation by the National Authority and emphasized the need for interaction with Member States in such cases.

Questions related to topic 7.3.2

Olaf Mosbach-Schulz inquired whether Member States would prefer a more practical approach, involving direct contact with experts who have experience with pests in their countries, rather than using a questionnaire, to gather information efficiently and comprehensively.

Germany's response indicates an understanding that the initial questionnaire will be straightforward, focusing on the distribution of the pest, its presence in the EU, and any available information on the impact. Germany suggests that this questionnaire could also include a request to Member States with the pest to nominate or suggest experts who can be directly contacted, offering a combined approach.

Questions related to 8.1

Olaf Mosbach-Schulz raised a question regarding the collaboration with garden centers in the upcoming year. It was asked whether the campaign would incorporate information about invasive plants and if consideration had been given to potential economic conflicts that might arise from such inclusion.

Irene Zanetti acknowledged the complexity of the issue and emphasized the need to evaluate it as part of the campaign work. It was stressed the need to collaborate with industry stakeholders without making them feel accused and acknowledged the consideration of legislative and economic factors in the campaign.

Slovenia expressed optimism for the second year of the campaign and inquired about the visibility of posters in Ljubljana.

Irene Zanetti offered to provide additional information in this regard afterwards.