ANIMAL AND PLANT HEALTH UNIT

Scientific Panel on Plant Health
Minutes of the 90th Plenary meeting

WEB conference, 25 & 26 November 2020
(Agreed on 17 December 2020)

Participants

- **Panel Members**

Claude Bragard, Katharina Dehnen-Schmutz, Francesco Di Serio, Paolo Gonthier, Marie-Agnès Jacques, Josep Jaques Miret, Annemarie Justesen, Alan MacLeod, Sven Christer Magnusson, Panagiotis Milonas, Juan A. Navas-Cortés, Stephen Parnell, Philippe Reignault, Roel Potting, Hans-Hermann Thulke, Wopke van der Werf, Antonio Vicent, Jonathan Yuen and Lucia Zappalà.

- **Hearing Experts:**

Camille Picard (EPPO); Yue Jin, (USDA ARS, Cereal diseases laboratory)

- **European Commission and/or Member States representatives:**

Maria Kammenou, Rosalinda Scalia and Panagiota Mylona (EC, DG SANTE, Unit Plant Health)

- **EFSA:**

ALPHA Unit: Caterina Campese, , Ewelina Czwienczek, Eduardo De La Peña, Alice Delbianco, Ciro Gardi, Ignazio Graziosi, Svetla Kozelska, Nikolaus Križ, Andrea Maiorano, Giulia Mattion, Alzbeta Mikulova, Marco Pautasso, Oresteia Sfyra; Giuseppe Stancanelli, Franz Streissl, Emanuela Tacci, Sara Tramontini and Sybren Vos.

AMU Unit: Olaf Mosbach Schulz

1. Welcome and apologies for absence

The Chair welcomed the participants.

2. Adoption of agenda

The agenda was adopted without changes

3. Declarations of Interest of Scientific Committee/Scientific Panel/ Members

Nothing to declare.

4.1 Agreement of 89th PLH Plenary meeting minutes

89th PLH Plenary meeting minutes were agreed.

5 Scientific outputs submitted for discussion and possible adoption

5.1 Art. 29 Scientific opinion on the request from United States regarding import of oak logs with bark under a system approach EFSA-Q-2020-00547

The European Commission submitted to the EFSA Panel on Plant Health a Dossier by USDA proposing a systems approach to mitigate the risk of entry of *Bretziella fagacearum* to the EU when trading oak logs with bark from the USA. Due to the forthcoming ban of methyl bromide (MB), the Dossier indicates sulfuryl fluoride (SF) as the substitute fumigant for this commodity. After collecting additional evidence from USDA, EU NPPOs, external experts and the published literature, the Panel performed a quantitative assessment on the likelihood of pest freedom for *B. fagacearum* at the point of entry in the EU, comparing the proposed systems approach with those already implemented by Commission Decision 2005/359/EC. The Panel provided also a non-quantitative assessment for all risk reduction options (RROs) proposed to be undertaken in the EU, from the point of entry to processing at the sawmill. The quantitative assessment until the EU point of entry, based on experts' judgement, indicated that: i) the most effective import option remains the current one with MB (95% certainty that between 9,573 and 10,000 containers per 10,000 would be free of *B. fagacearum*), followed by that with SF (95% certainty, that between 8,639 and 10,000 containers per 10,000 would be free of B. fagacearum) and, last, by the other existing options based on delivering white oak logs in certain periods of the year to certain regions of the EU without fumigation (95% certainty, between 7,803 and 10,000 containers per 10,000). RROs proposed to be undertaken in the EU are expected to further reduce the risk of establishment of *B. fagacearum*, should these RROs be regulated, correctly implemented and checked by NPPOs. A wood pathway analysis is needed to quantitatively assess the importance of each measure and to optimise regulatory actions and risk management efforts. The scientific opinion was adopted on 26 November 2020.

5.2 Art. 29 Scientific opinion on Commodity Risk Assessment of *Momordica charantia* fruit from Honduras EFSA-Q-2020-00044 (for endorsement

for written adoption procedure to be launched in December 2020)

The European Commission requested the EFSA Panel on Plant Health to prepare and deliver risk assessments for commodities listed in Commission Implementing Regulation (EU) 2018/2019 as "High risk plants, plant products and other objects". Momordica fruits originating from countries where *Thrips palmi* is known to occur qualify as high risk plants. This draft Scientific Opinion covers the introduction risk for *T. palmi* posed by fruits of *Momordica charantia* L. imported from Honduras, taking into account the available scientific information, including the technical information provided by the National Service of Agrifood Health and Safety (SENASA) of Honduras. The risk mitigation measures proposed in the technical dossier from Honduras were evaluated taking into account the possible limiting factors. An expert judgement is given on the likelihood of pest freedom taking into consideration the potential pest pressure in the field, the risk mitigation measures acting on the pest in the field and in the packinghouse, including uncertainties associated with the assessment.

The scientific opinion was endorsed by the Panel for possible adoption by written procedure in December 2020 after a further commenting phase by the Panel. The Panel agreed on using the proposed methodology and structure of this opinion to finalise also all the other opinions on commodity risk assessments of *Momordica* for *Thrips palmi*. In total, five opinions on commodity risk assessment of *Momordica* for *Thrips palmi* (based on on dossiers submitted by Honduras, Mexico, Sri Lanka, Suriname and Thailand will be proposed, after a commenting phase, for possible written adoption by the Panel in December 2020.

5.3 Art. 29 Scientific opinion on Commodity risk assessment of *Ficus carica* plants from Israel EFSA-Q-2019-00655

The European Commission requested the EFSA Panel on Plant Health to prepare and deliver risk assessments for commodities listed in Commission Implementing Regulation (EU) 2018/2019 as "High risk plants, plant products and other objects". This Scientific Opinion covers the plant health risks posed by the following commodities: (i) dormant and free of leaves one-year-old bare rooted plants and (ii) free of leaves one-year-old liners of *Ficus carica* imported from Israel, taking into account the available scientific information, including the technical information provided by Israel. The relevance of any pest for this opinion was based on evidence following defined criteria. Four EU quarantine pests, *Euwallacea fornicatus, Hypothenemus leprieuri, Scirtothrips dorsalis* and *Spodoptera frugiperda*, and eleven EU non-regulated pests fulfilled all relevant criteria and were selected for further evaluation. For these pests, the risk mitigation measures proposed in the technical dossier from Israel were evaluated separately for bare rooted plants and for liners, taking into account the possible limiting factors. For these pests, an expert judgement was given

on the likelihood of pest freedom taking into consideration the risk mitigation measures acting on the pest, including uncertainties associated with the assessment. The estimated degree of pest freedom varied among the pests evaluated. *Aonidiella orientalis* and *Russellaspis pustulans,* were the most frequently expected pests on the imported bare rooted plants, and *Scirtothrips dorsalis* on liners. The Expert Knowledge Elicitation indicated, with 95% certainty, that between 9,585 and 10,000 bare rooted plants per 10,000 would be free of *Aonidiella orientalis* and *Russellaspis pustulans*and between 9,456 and 10,000 liners per 10,000 would be free of *Scirtothrips dorsalis.*

The scientific opinion was adopted on 26 November 2020.

5.4 Art. 29 Scientific opinion on Commodity Risk Assessment of *Persea americana* from Israel EFSA-Q-2019-00654

The EFSA Panel on Plant health was requested to prepare and deliver risk assessments for commodities listed in the relevant Implementing Acts as "High risk plants, plant products and other objects" (Commission Implementing Regulation (EU) 2018/2019 establishing a provisional list of high risk plants, plant products or other objects, within the meaning of Article 42 of Regulation (EU) 2016/2031). This scientific opinion covers the known plant health risks posed by the following commodities: (i) scions and (ii) grafted plants of *Persea americana* imported from Israel, taking into account the available scientific information, including the technical information provided by the Plant Protection and Inspection Services from Israel. 'The relevance of an EU quarantine pest for this opinion was based on evidence that: (i) the pest is present in Israel; (ii) *P. americana* is a host of the pest, and (iii) the pest can be associated with the commodity. The relevance of any other pest, not regulated in the EU, was based on evidence that: (i) the pest is present in Israel (ii) the pest is absent in the EU; (iii) *P. americana* is a host of the pest; (iv) the pest can be associated with the commodity and (v) the pest may have an impact and can pose a potential risk for the EU territory. 'Twenty-six pests (15 insects, one mite, 9 fungi and one viroid) that fulfilled all criteria were selected for further evaluation. For the 26 selected pests, the risk mitigation measures proposed in the technical dossier were evaluated. Limiting factors on the effectiveness of the measures were documented. For each of the 26 pests, an expert judgement is given on the likelihood of pest freedom taking into consideration the risk mitigation measures acting on the pest, including any uncertainties. The fungi *Lasiodiplodia pseudotheobromae* and *Neoscytalidium dimidiatum* were the pests most frequently expected on the imported commodities. The Expert Knowledge Elicitation indicated, with 95% certainty, that between 9,573 and 10,000 bundles of scions per 10.000; and 9,747 and 10,000 grafted plants per 10.000 would be free of these two fungi.

The scientific opinion was adopted on 26 November 2020.

During the discussion it was stressed that it is important to respect the different weight of EUROPHYT interceptions for different categories of pests, e.g. EU-quarantine pest, pests not regulated in the EU or pest which were described recently, to avoid any bias when performing expert knowledge elicitations.

5.5 Art.29 Scientific opinion on the list of non-EU phytoplasmas of tuber-forming *Solanum* spp EFSA-Q-2020-00732

Following a request from the European Commission, the EFSA Panel on Plant Health prepared a list of non-EU phytoplasmas of tuber-forming *Solanum* spp. A systematic literature review and search of databases identified 12 phytoplasmas infecting *S. tuberosum*. These phytoplasmas were assigned to three categories. The first group (a) consists of seven non-EU phytoplasmas, known to occur only outside the EU ('*Candidatus* Phytoplasma americanum', '*Ca*. P. australiense', '*Ca*. P. fragariae'-related strain (YN-169, YN-10G), and '*Ca*. P. hispanicum') or having only limited presence in the EU ('*Ca*. P. aurantifolia'–related strains, '*Ca*. P. pruni'-related strains, and '*Ca*. P. trifolii'). The second group (b) consists of three phytoplasmas originally described or reported from the EU. The third group (c) consists of two phytoplasmas with substantial presence in the EU, whose presence in *S. tuberosum* is not fully supported by the available literature. Phytoplasmas of categories (b) and (c) were excluded at this stage from further categorisation efforts. Three phytoplasmas from category (a) ('*Ca*. P. australiense', '*Ca*. P. hispanicum', and '*Ca*. P. trifolii') were excluded from further categorisation, as a pest categorization has been performed by EFSA. Comments provided by the EU Member States were integrated in the opinion. The main uncertainties of this listing concern: the taxonomy, the geographic distribution and prevalence, and host range. The following phytoplasmas considered as non-EU and whose presence in *S. tuberosum* is fully supported by literature (category (a)) are categorised by the Panel in a separate opinion: '*Ca.* P. americanum', '*Ca*. P. fragariae'-related strain (YN-169, YN-10G), '*Ca*. P. aurantifolia'–related strains, and '*Ca*. P. pruni'-related strains.

The opinion was adopted on 26 November 2020.

5.6 Art.29 Scientific opinion on pest categorisation of non-EU phytoplasmas of tuber-forming *Solanum* spp.

Following a request from the European Commission, the EFSA Panel on Plant Health performed a pest categorisation of four phytoplasmas of tuber-

forming *Solanum* spp. known to occur only outside the EU or having a limited presence in the EU. The only tuber-forming species of *Solanum* reported to be phytoplasma-infected is *S. tuberosum*. This opinion covers '*Candidatus* Phytoplasma americanum', '*Ca*. P. aurantifolia'–related strains (GD32; St_JO_10, 14, 17; PPT-SA; Rus-343F; PPT-GTO29, -GTO30, -SINTV; Potato Huayao Survey 2; Potato hair sprouts), '*Ca*. P. fragariae'-related strains (YN-169, YN-10G), and '*Ca*. P. pruni'-related strains (Clover yellow edge; Potato purple top AKpot7, MT117, AKpot6; PPT-COAHP, -GTOP). Phytoplasmas can be detected by molecular methods and are efficiently transmitted by vegetative propagation. Phytoplasmas are also transmitted in a persistent and propagative manner by some insects belonging to families within Cicadomorpha, Fulgoromorpha and Sternorrhyncha (order Hemiptera). No transovarial, pollen or seed transmission has been reported. The reported natural host range of the phytoplasmas categorised here varies from restricted ('*Ca*. P. americanum', and '*Ca*. P. fragariae'-related strains) to wide ('*Ca*. P. aurantifolia'-related strains and '*Ca*. P. pruni'-related strains), thus increasing the possible entry pathways in the latter case. *S. tuberosum* is widely cultivated in the EU. All the categorised phytoplasmas can enter and spread through the trade of host plants for planting, and by vectors. Establishment of these phytoplasmas is not expected to be limited by EU environmental conditions. The introduction of these phytoplasmas in the EU would have an economic impact. There are measures to reduce the risk of entry, establishment, spread and impact. Uncertainties result from limited information on distribution, biology and epidemiology. All the phytoplasmas categorised here meet the criteria evaluated by EFSA to qualify as potential Union quarantine pests, and they do not meet all the criteria to qualify as potential regulated non-quarantine pests, because they do not occur or are not known to be widespread in the EU.

The opinion was adopted on 26 November 2020.

5.7 Art. 29 Scientific opinion on Pest categorisation of *Diaphorina citri* (EFSA-Q-2020-00119)

The EFSA Panel on Plant Health performed a pest categorisation of *Diaphorina citri* (Hemiptera: Liviidae) (Asian citrus psyllid) for the European Union (EU). *D. citri* is a key pest of citrus in several countries as it is a vector of a serious bacterial disease called Huanglongbing (HLB) or citrus greening. Eggs are laid on tips of growing shoots on and between unfurling leaves. Females may lay more than 800 eggs during their lives. Nymphs pass through five instars. The total life cycle requires from 15 to 47 days, depending upon the season. Adults may live for several months. There is no diapause, but populations are low in winter. The species completes 9-10 generations/year; however, under protected conditions, up to 16 generations have been recorded. Commission Implementing Regulation (EU) 2019/2072 (Annex IIA) regulates *D. citri*, as a quarantine pest not known to occur on the EU territory. Fruits and plants for planting provide

potential pathways for entry into the EU. Climatic conditions and the availability of host plants provide conditions to support establishment in the EU. The introduction of *D. citri* would have an economic impact in the EU through direct but mainly indirect effects due to HLB potential transmission. Phytosanitary measures are available to reduce the likelihood of entry. *D. citri* satisfies the criteria that are within the remit of EFSA to assess for it to be regarded as a potential Union quarantine pest. *D. citri* does not meet the criteria of occurring in the EU, nor plants for planting being the principal means of spread, for it to be regarded as a potential Union regulated non-quarantine pest.

The scientific opinion was adopted on 26 November 2020.

5.8 Art. 29 Scientific opinion on the Pest categorisation of *Diabrotica undecimpunctata howardi* EFSA-Q-2020-00118

The EFSA Panel on Plant Health performed a pest categorisation of *Diabrotica undecimpunctata howardi* (Coleoptera: Chrysomelidae) for the EU. This subspecies occurs in North and Central America. Adults oviposit on annual plants in the families Asteraceae, Chenopodiaceae, Cucurbitaceae, Fabaceae, Poaceae, Polygonaceae, and Solanaceae. Adults feed on tender plant parts in hosts in 40 additional botanical families. Preimaginal development takes place on the roots of the host plant, where larvae feed and pupate. *D. undecimpunctata howardi* is a multivoltine species. Overwintering adults, which may enter a facultative diapause, abandon crops in autumn and reinvade them in spring. *D. undecimpunctata howardi* is not known to occur in the EU and is regulated in Annex IIA of Commission Implementing Regulation 2019/2072. This species is a competent vector of *Erwinia tracheiphila* (Smith) Bergey et al., which can cause bacterial wilt, a serious disease of cucurbits. The bacterium, which is restricted to temperate midwestern and eastern North America, is not regulated in the EU. Within Commission Implementing Regulation 2019/2072, potential entry pathways for *D. undecimpunctata howardi*, such as Asteraceae, Poaceae, and Solanaceae plants for planting with foliage and soil/growing medium, and soil/growing media by themselves can be considered as closed. However, plants for planting of the families Chenopodiaceae, Cucurbitaceae, Fabaceae, and Polygonaceae are not specifically regulated. Should *D. undecimpunctata howardi* arrive in the EU, climatic conditions and availability of susceptible hosts provide conditions suitable for establishment and further spread. Economic impact is anticipated in maize and outdoor cucurbit production. *D. undecimpunctata howardi* satisfies the criteria that are within the remit of EFSA to assess for this species to be regarded as a potential Union quarantine pest. This species does not meet the criteria of being present in the EU, nor plants for planting being the main pathway for spread, for it to be regarded as a potential regulated non-quarantine pest.

The scientific opinion was adopted on 26 November 2020.

5.9 Art. 29 Scientific opinion on the Pest categorisation of *Leptinotarsa decemlineata* EFSA-Q-2020-00120

The EFSA Panel on Plant Health performed a pest categorisation of the Colorado potato beetle, *Leptinotarsa decemlineata* (Say) (Coleoptera: Chrysomelidae) for the European Union (EU). *L. decemlineata* is primarily known as a major defoliator of potatoes (Solanum tuberosum); feeding damage can result in significant yield loss. Field grown tomatoes and eggplants can be attacked and wild solanaceous species are also hosts. Having first established in Europe from North America in the early 20th century, *L. decemlineata* is now distributed in 21 EU member states and is regulated in the EU by Commission Implementing Regulation 2019/2072, (Annex III) with protected zones in place for Cyprus, Ireland, Malta, Northern Ireland, parts of Spain (Ibiza and Menorca) and Portugal (Azores and Madeira), seven districts of Finland and five counties in Sweden. Adults occasionally enter some protected zones due to wind currents that carry flying adults; pathways are also provided by plant produce moved in trade. The availability of hosts and suitable climate make establishment of the pest possible in protected zones in the EU, especially in the southern EU. Spread within the protected zones could occur via adult flight and via leafy vegetables moved in trade. Impacts on potato yields would be expected within the protected zones; outdoor grown tomatoes and eggplants could be impacted in the protected zones of southern member states too. Previous incursions into the current protected zones have been eradicated. *L. decemlineata* satisfies all of the criteria that are within the remit of EFSA to assess, to conclude that it is a potential protected zone quarantine pest. *L. decemlineata* does not satisfy all of the criteria that are within the remit of EFSA to assess with respect to regulated non-quarantine pest status, specifically plants for planting are not the main means of spread.

The scientific opinion was adopted on 26 November 2020.

5.10 Art. 29 Scientific Opinion on the Pest categorisation of beet necrotic yellow vein virus EFSA-Q-2020-00125

Following a request from the EU Commission, the Panel on Plant Health performed a categorisation of beet necrotic yellow vein virus (BNYVV), the causal agent of the sugar beet rhizomania disease. The virus is currently listed in Annex III as a protected zone (PZ) quarantine pest of the Commission Implementing Regulation (EU) 2019/2072. The identity of the BNYVV is well established. BNYVV is a soil-borne virus transmitted by the obligate root plasmodiophorid endoparasite *Polymyxa betae*. BNYVV is widely distributed in the EU, but is not reported in the following EU protected zones: Ireland, France (Brittany),

Portugal (Azores), Finland and Northern Ireland. The virus may enter, become established and spread in the PZs via *P. betae* resting spores with soil and growing media as such or attached to machinery and with roots and tubercles of species other than *B. vulgaris* and with plants for planting. Introduction of BNYVV would have a negative impact on sugar beet and other beet crops in PZs, because of yield and sugar content reduction. Phytosanitary measures are available to reduce the likelihood of entry and spread in the PZs. Once the virus and its plasmodiophorid vector have entered a PZ, their eradication would be difficult due to the persistence of viruliferous resting spores in the soil. The main knowledge gaps or uncertainties identified concerning the presence of BNYVV in the PZs and the incidence and distribution of BNYVV in Switzerland, a country to which a range of specific requirements do not apply. BNYVV meets all the criteria that are within the remit of EFSA to qualify as potential Protected Zone Union Quarantine Pest. Plants for planting are not considered as a main means of spread, and therefore BNYVV does not satisfy all the criteria evaluated by EFSA to qualify as potential Union Regulated non-Quarantine Pest.

The scientific opinion was adopted on 26 November 2020.

6 Feedback from Scientific Panel including their Working Groups, Scientific Committee, EFSA and European Commission

6.1 Discussion session on *Berberis* species and varieties susceptibility to cereal yellow (stripe-) and stem rusts, including information sources (in support of high risk plants Commodity risk assessment for *Berberis*)

- Introduction to cereal yellow (stripe-) rusts cycle with *Berberis* as host, including mechanisms for formation of new rust races

Jonathan Yuen (PLH Panel) introduced the topic of cereal rust and its life cycle, with *Berberis* as host, including mechanisms for formation of new rust races. Members of five genera of rust fungi (*Aecidium, Cumminsiella, Edythea, Puccinia, and Pucciniosira* s.l., including *Gambleola*) parasitize *Berberis* (barberry) or *Mahonia*. This includes two damaging *Puccinia* species: *Puccinia graminis* Pers. (causing stem rust) and *Puccinia striiformis* Westend (causing yellow rust). Another species of *Puccinia* infecting *Berberis* is *Puccinia arrhenatheri* (Kleb.) Eriksson. Stem rust, caused by *P. graminis*, exists in variants on different host species. These variants (which are characterized by different spore morphology, are also called formae specialis and could actually be different species) are on wheat: *P. graminis*

f.sp. tritici, on oats: *P. graminis* f.sp. avenae, and on barley: *P. graminis* f.sp. hordei.

Rusts typically have races, which are defined by the ability to overcome different resistance genes. If there are four resistance genes, 16 different races are possible. The number of potentially existing races scales exponentially with the number of resistance genes. There are different systems for naming races. In stem rust letters are used, each representing four genes. Clonal lineages are related individuals, determined with molecular markers.

The life cycle of stem rust was described and a history of our understanding of the connection between stem rust and barberry was sketched. Barberry eradication as a way to control rust has indeed a long history. Today, *P. graminis* reproduces sexually in Sweden with wheat, rye, and oats as the grass host. Many wheat and oat varieties grown today lack resistance genes to stem rust. There are possible conflicts arising between biodiversity aspects and disease control, e.g. with planting of barberry in the UK to ensure survival of the barberry carpet moth (*Pareulype berberata*).

There is clearly production of both urediniospores and teliospores by *P. striiformis* in Europe, but whether sexual reproduction of yellow rust takes place in Europe is still a question. Barberry is the alternate host of *P. striiformis* and *P. striiformis* in Europe forms teliospores that produce basidiospores that can theoretically infect barberry. However, naturally occurring aecia of *P. striiformis* have not been found in Europe so far, whilst there is sexual reproduction of *P. striiformis* in Asia, where a higher diversity of barberry species is present. Sexual reproduction of these rust fungi is a concern from a phytosanitary perspective, because it can lead to the emergence of new races overcoming resistance in cultivated cereal hosts. Although new individuals (clones or races) of rust cannot enter due to import of barberry because of sexual recombination, new genetic variation (which could lead to new races or clones) could enter via barberry. Basidiospores of *P. graminis* and *P. striiformis* infect the leaves of barberry. If aecia (resulting after the fertilization of the pycnia) are present in the barberry leaves when plants with leaves are imported, the aeciospores will be able to directly infect the cereals or grasses when planted in Europe. An aecial cluster contains many different genotypes of the rust. Thus the risk of import on barberry plants is reduced when importing plants without leaves, with the exception of *P. arrhenatheri* that can cause a systemic infection of barberry and could enter on imported plants without leaves.

- Distribution and spread of cereal yellow and stem rust species and races, including sources of information (Wheat Rust Toolbox and other sources)

Annemarie Justesen (PLH Panel) provided an overview on the distribution and spread of cereal rusts. There are three rust diseases on wheat in Europe: stem rust, yellow rust and leaf rust. Only the first two are

considered here, as the third does not infect barberry. A map of suggested recent global migration routes of the yellow rust fungus was shown, with likely importation of genetically diverse strains into Europe in 2011 from the Himalaya region. The steps from surveys in the fields and lab sampling to data analysis and communicating results with maps and graphs were described. Automatically updated maps and charts can be found e.g. at http://rusttracker.cimmyt.org/ and http://wheatrust.org/ .

The diagnosis of wheat rust races requires genotyping and pathotyping on a differential set of wheat lines with known resistance genes. The potential impact of new rust races is investigated in field trials infected with local frequently occurring races and new exotic races are tested in quarantine greenhouse facilities. European and global maps for stem and yellow rust genetic groups were described. The rationale behind barberry eradication programs was mentioned: eradication is supposed to delay rust disease onset, reduce the number of epidemics and decrease rust race diversity. A non-exhaustive list of prevalent rust species complexes producing aecia on barberry was provided. Some activities (barberry surveys, DNA fingerprinting of aecial clusters, aecial recovery on cereal hosts) of the RustWatch research programme were briefly summarized.

In conclusion, for yellow rust in Europe there is evidence of exotic incursions, clonal evolution, and somatic hybridizations, but this rust is not detected on barberry in Europe and there are few reports on barberry in Asia. For stem rust in Europe, there is evidence not just of exotic incursion and clonal evolution, but also of sexual recombination in barberry areas. This rust is frequently occurring on barberry in Europe and elsewhere. Other rust species on barberry in Europe include the *Puccinia brachypodii* complex, with multiple grass hosts.

- *Berberis* species and varieties susceptibility to cereal yellow and stem rusts, including sources of information

Yue Jin (USDA ARS Cereal Disease Laboratory - Univ. of Minnesota, US) presented a summary on the susceptibility of *Berberis* and *Mahonia* spp. to *Puccinia graminis* and *P. striiformis.* There are two major groups of *Berberis* spp., a boreal one ("Septentrionales") with about 240 species, and an austral one ("Australes") in South America, with about 180 species. The genus *Mahonia* is instead divided into a western (North America) and an eastern (Asia) group.

The barberry distribution overlaps with several major wheat production regions (North America, Europe, Asia). The objectives of rust tests were summarized: 1) to identify targets for eradication, 2) to prevent the introduction of susceptible species, 3) to identify resistant species/varieties for ornamental purposes, and 4) to expand knowledge on host-pathogen interactions.

An overview of resistance/susceptibility to *P. graminis* and *P. striiformis* in the different groups of *Berberis* and *Mahonia* was shown, including some online information sources and the main steps of the data generation process. The main components of the rust flora on *Berberis*/*Mahonia* were listed and an overview of the migration routes of different *Berberis* spp. in Europe was shown. The life cycle of *P. striiformis* was summarized (a sexual stage exists). Novel virulence has recently been detected in sexual stem rust populations in Georgia, Kazakhstan and Spain.

- Overall discussion on the risk of *Berberis* focusing on the High Risk Plants commodity risk assessment

The session was concluded by an overall discussion focusing on the risk due to import of *Berberis* into the EU in relation to the EFSA high risk plants commodity risk assessment. The main points of discussion were: what is the risk of *Berberis* plants import trade for the direct introduction of new races and genetic variations of cereal yellow and stem rusts? What is the risk of *Berberis* plants import trade for the development of new races of cereal yellow and stem rusts? What is *Berberis* import risk versus *Berberis* growing risk?

Various options for the EFSA PLH Panel in relation to the commodity risk assessment of Berberis plants were described: adding detailed guidelines on *Berberis* import risk for high risk plants in PLH Panel plenary minutes, or including in the high risk plants risk assessment template some specific guidelines for *Berberis*, or developing a specific PLH Panel opinion on the risk of *Berberis* plants with general introduction and specific sections providing guidelines to support high risk plants commodity risk assessment.

It was pointed out that the import risk is different for *Berberis* with and without leaves. Also Berberis species show different susceptibility to cereal rusts. Moreover, cereal rust new races develop and spread rapidly, so that it would be difficult to define which races are non-EU ones and which not. Considering non-EU cereal rust races as a basis of an assessment of a Berberis import dossier might create a precedent for other high risk plants dossiers in the future, with potentially much more work due to the need to consider in the assessment also non-EU strains of pests that are already widespread in the EU. However, it was noted on this regard that EPPO is currently working on a project about non-EU lineages of *Hymenoscyphus fraxineus*, the fungus causing ash dieback, which is already widespread in Europe but could become more damaging if new genetic variation was imported into the EU from Asia. In addition, the EFSA PLH Panel has already dealt with non-EU strains in the past, e.g. for *Cryphonectria parasitica*, potato cyst nematodes and non-EU isolates of certain potato viruses).

6.2 Short updates from PLH Panel Working Groups (High Risk Plants; Israel and South Africa citrus

fruit with system approach for false codling moth (FCM); agricultural insects pest categorisation)

An update of the status of the HRP WGs (Section I, II, III and *Momordica*) was presented. Nineteen dossiers are on-going (two of them adopted during this Plenary), twelve are in clock stop and five are under evaluation. The chair of the WG on Israel and South Africa citrus system approaches for FCM presented the work done during the last weeks including the organization of a hearing with Israel. The assessment of the dossier of Israel will be completed in the course of December and the Scientific Opinion is expected to be presented for discussion in the next plenary meeting in January 2021.

The Agricultural Insects WG presented the last three pest categorisations during the Plenary meeting belonging to the M-2017-0055 mandate (agenda points 5.7., 5.8., 5.9.). The same WG continues working on another mandate (M-2020-0075) 'Request to provide a scientific opinion whether the import of bananas constitutes a potential pathway for the importation of non-EU Tephritidae into the EU', which is due for adoption in January 2021.

6.3 Short update Feedback from Scientific Committee ongoing activities

PLH Panel Chair informed the Panel about the 101 SC Plenary discussion on different topics such as:

- Update on the draft EC mandate on "Risk benefit assessment of fish consumption in relation to the presence of dioxin (PCDD/FS) and dioxin-like PCBs"
- Update on the finalisation of the guidance for risk assessment of nano substances and the nano technical
- Guidance
- Draft opinion on Non Monotonic Dose Response
- Presentation of PLH Panel feedback in the SC plenary forecasted by the end of 2021

PLH Panel chair to update the Panel at the Plenary in January after the SC Plenary for further detail on the PLH panel feedback presentation at the SC plenary

6.4 Feedback from European Commission

European Commission representatives participated to the various discussions as observers, providing their feedback to the relevant items.

6.5 Update from EFSA, including the additional WEB PLH Panel plenary meetings calendar 2021

The PLH Panel Coordinator proposed an extra afternoon for the plenary in January to be added to the second day, Panel agreed on the proposal. As discussed in September plenary, the need for additional short web plenary meetings was identified, for which a poll will be circulated to the Panel.