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Dear Sir/Madam

RE: Response to the UK policy review for *Pochazia shantungensis*

Thank you for submitting views on the development of a UK policy position for *Pochazia shantungensis* (known as the brown-winged planthopper) which also covers the recently described species *P. chinensis*, as most of the literature could refer to either species. This letter is to notify you of the outcome.

Recommendations

The UK Plant Health Risk Group (PHRG) recommended the following:

No statutory action against this pest.

The draft Pest Risk Analysis (PRA) concluded that *P. shantungensis* could not establish outdoors due to the cool UK summers compared to the current range of the pest. The pest is also not expected to be able to establish in most protected cultivation due to lack of year-round woody hosts. As *P. shantungensis* is not considered to be capable of establishing in the UK, or causing unacceptable economic impacts, it does not meet the criteria to be a quarantine pest.

During the period of engagement on the draft PRA, including consideration of new information provided about potential risks to fruit production in polytunnels, the current approach of statutory action against findings continued. This is in line with usual practice, where actions are based on preliminary assessments considered through the UK Plant Health Risk Register process, pending any more detailed assessment through the PRA process.

Background

Pochazia shantungensis is a hemipteran insect which feeds on sap of plants. The insects feed on a very wide range of plant species, both herbaceous and woody. Adults lay eggs

deep inside young twigs of woody plants, and the pest overwinters as eggs in the twigs. There are one or two generations per year. *Pochazia shantungensis* is thought to be native to eastern China and is now also found in other parts of Asia and scattered locations in southern Europe. In 2024 it was intercepted in England and Wales for the first time, with findings of the pest in multiple consignments of hardy ornamental stock from Italy.

The draft PRA examined the potential for establishment and lifecycle timings in detail, as these are considered to be the key factors for the risk to the UK. The conclusion was that *P. shantungensis* could not complete its lifecycle outdoors in any part of the UK, even in years with very hot summers. Eggs may be able to hatch, but the nymphs could not develop to adults before autumn. If nymphs arrived with imported plants, these individuals might develop to adult and lay eggs. These eggs could overwinter and hatch the next year but would not be able to develop all the way to adults and lay more eggs. Temperatures are higher in protected cultivation (especially heated glasshouses) and may allow *P. shantungensis* to complete its full lifecycle. However, the adults require woody plants to lay their eggs into. Only a limited number of specialist growers or botanical collections are likely to keep woody plants in heated glasshouses all year round.

Summary of responses

Five responses were received. One response expressed concerns regarding the risk of *P. shantungensis* to UK soft and stone fruit production in polytunnels. The points raised required further investigation and analysis which has now been completed. Three responses explicitly supported the conclusions of the draft PRA but mentioned some points for consideration. One response neither explicitly agreed nor disagreed with the conclusions of the draft PRA but again raised some points to consider. Details of all comments are in the next section.

Key concerns and government response

The Invasive Pest and Disease Working Group for Soft Fruit and Cherries grown in the UK expressed concerns that the risk to soft and stone fruit production in polytunnels (and some glasshouses) in the UK had not adequately been taken into account. They pointed out temperatures in polytunnels where some woody soft and stone fruit plants are grown are considerably higher than temperatures outside and gave information about the importance of the soft fruit sector to the UK. This was valuable new information to help complete the draft PRA and also highlights the importance of the engagement process and maintaining recommended protective measures based on preliminary assessments, pending a more detailed assessment, in cases where a PRA has been commissioned to assess the risk further.

> Following receipt of this response, there was further correspondence regarding polytunnel production regimes and temperatures inside such structures. The respondent was able to share temperature data recorded inside several UK polytunnels over three different years.

Using the new polytunnel temperature data, the UK Plant Health Services were able to conduct more climate analysis, considering UK polytunnels explicitly. Though the data provided do show polytunnels are significantly warmer than outdoor temperatures in daytime, they return to near-ambient temperatures at night. Considering degree day (DD) accumulation with a threshold of 12°C, most UK polytunnels are still considerably below the annual DD in areas where *P. shantungensis* is established. However, in the warm year of 2022, one polytunnel in the southeast of England did show DD accumulations which are approaching the DD observed in the current range.

Other factors considered were that findings of the pest in the UK have largely been on ornamental plants, and not on plants for fruit production and so there is a limited pathway for entry of the pest into the polytunnels. There remains the risk the pest could spread from infested nurseries or gardens to fruit production, but it does not appear to be a particularly strong flyer. It is unclear if the pest would favour polytunnels or glasshouses in the UK, and there is a lack of reports from protected cultivation in the current range, as well as a lack of reports of impacts on the fruit crops which are grown under protection in the UK. There is also a lack of effective measures to prevent entry: the pest has a very wide host range, is present in Italy and it seems likely it will continue to spread in southern parts of mainland Europe.

Overall, though the UK Plant Health Services acknowledges the risk of *P. shantungensis* to polytunnels is higher than the first draft of the PRA suggested, taking account of the new information provided during the engagement period, establishment in polytunnels is still uncertain. This, combined with the lack of impacts identified during the assessment and difficulties in taking ongoing effective measures to prevent entry of the pest, mean that the conclusion based on the draft PRA not to take statutory action remains the same, though the new information does make the outcome less clear-cut. All of the factors listed above have contributed to confirming a final recommendation and decision.

The Wales Plant Health Evidence and Advisory Group agreed with the conclusions of the draft PRA. However, concerns were raised about the capacity of *P. shantungensis* to transmit *Xylella fastidiosa*, especially given the planthopper's potential to move between many different host plants.

No information is available about pathogens *P. shantungensis* may be capable of vectoring. However, it seems very unlikely that it will be a competent vector of *Xylella fastidiosa*. *Xylella* is a xylem-transmitted bacterium, and its main vectors are all hemipteran insects which feed on xylem. *Pochazia shantungensis* feeds on phloem (sap) and is therefore unlikely to acquire *Xylella* during normal feeding. Additionally, plants from regions where *Xylella* is present are top priority for import checks in Great Britain.

In terms of vectoring other pathogens, it is possible that *P. shantungensis* may be capable of transmitting viruses in sap, similar to many species of aphids. However, no evidence of *P. shantungensis* vectoring any pathogen could be located during the literature search for this PRA.

The British Tomato Growers Association (BTGA) did not explicitly state if they agreed with the conclusion of the draft PRA for no further statutory action. They expressed concerns that pest overwintering was not fully addressed, both in relation to climate change and heated glasshouses. The concern was raised that this could allow the pest to cause significant economic issues in future years. The BTGA suggested that measures to control the pest should be researched, and suggested this research was needed to insure and mitigate against any future increase in risk, for whatever reason.

In response to the concern about overwintering, even in current UK climates the draft PRA considers overwintering as eggs in much of the UK is perfectly possible. In parts of South Korea where the pest is established, winter temperatures can be as low as -20°C, temperatures much colder than typically found in UK winters. The limiting factor for UK establishment is considered to be the relatively cool UK summers. Eggs would hatch later in the year, nymphs take longer to develop, and it is considered unlikely that mature adults capable of laying eggs would develop outdoors in the UK before winter. No evidence was found that *P. shantungensis* is capable of overwintering as nymphs or adults, with all literature stating that eggs are the overwintering stage. Therefore, a two-year lifecycle was not considered feasible.

Climate change was considered to a limited extent in the draft PRA. Though the UK is undoubtedly warming, any climate change projection up to 2050 showed the UK summers would still be far cooler than any location where the pest has currently been recorded. By 2100 (far beyond the timeframe of this PRA), most climate change scenarios still predict the UK summers would not be warm enough for significant outdoor establishment of *P. shantungensis*. Only under the rampant fossil fuel consumption scenario, predicting a rise of around 4°C, did some areas of southeast England start to show limited establishment potential.

Establishment in heated glasshouses was also considered in the draft PRA. It is acknowledged that temperatures in such environments may be substantially warmer and could allow the pest to develop through a complete lifecycle. There does not appear to be a requirement for a period of chilling (i.e., winter) for eggs to develop, as the pest has two generations per year in some parts of its current range. The main factor limiting establishment in glasshouses was considered to be the lack of woody hosts for egg laying. As far as could be determined, while adults and nymphs will feed on herbaceous plants, mature adults will only lay eggs in woody plants. Eggs may be laid in the mid-rib of leaves as well as in young stems, but all these leaf records are from woody hosts. And therefore, while temperatures will be more suitable in protected cultivation, a lack of woody hosts was considered more limiting. The new data on establishment in polytunnels may also have some bearing on glasshouse establishment risks.

Control measures for *P. shantungensis* are an area of active research in South Korea, and there has also been a recent publication reporting on experiments on control methods from Türkiye. While not all the methods would be approved for use in the UK, these research papers would provide a good starting place when considering future control options for the UK.

The Horticultural Trades Association (HTA) supported the recommendations of the draft PRA, but had comments and concerns about timing, processes and communication between the UK Plant Health Services and its stakeholders. Very similar general comments regarding the lack of engagement by the UK Plant Health Services with the plant industry were received from an individual nursery, who proposed a regular roundtable meeting to discuss issues. Specific points were raised by the HTA relating to delayed timing of the UK Plant Health Risk Register entry and the length of time taken for the production of the UK PRA.

UK Plant Health Risk Register entries are prepared by a small team of specialist analysts, using outputs (like changes to the EPPO Alert list) from a horizon scanning process which identifies many potential pests for assessment. There are prioritised lists for addition to the Risk Register, and also for full PRAs. The lists are reviewed regularly and significant new information (such as the first UK interceptions of *P. shantungensis*) mean that a pest is prioritised for assessment under the Risk Register process.

PRAs are detailed documents and do take significant time to research, obtain and analyse data, and write. Then, there is a stringent internal review process before the documents are presented to the UK Plant Health Risk Group. The draft PRA for *P. shantungensis* was completed as soon as possible, recognising the complexity and level of detail necessary, to provide robust technical information to support a long-term policy position on this pest. To ensure the process was as efficient as possible, there was agreement on timescales before the draft PRA was started, to balance time taken to produce the draft PRA with the evidence needed for risk assessment. For example, detailed climate modelling was a focus as this was key for the pest risk to the UK; but collating detailed host lists would not have significantly added to the assessment and was not done.

Stakeholder engagement is an essential component in any pest risk assessment. The Plant Health Advisory Forum (PHAF) is made up of representatives of relevant industry and other interested stakeholder groups, Defra/APHA officials, representatives from the Devolved Governments and the Forestry Commission, and meets every three months. This forum is regularly used to provide an opportunity for early discussion on emerging or developing issues as well as increasing transparency and understanding for all participants. *Pochazia shantungensis* was discussed at the February PHAF meeting. An update on the position relating to *P. shantungensis*, following the stakeholder engagement on the draft PRA, will be provided in the next PHAF meeting at the end of May. A pest alert on *P. shantungensis* was published in December 2024 to raise awareness of this pest. On behalf of the UK Plant Health Services, Defra engaged with stakeholders regarding *P. shantungensis* at a number of events, such as the HTA Retailers Day in March 2025 and an online webinar for YPHA (Young People in Horticulture) in October 2024.

Currently, the UK Plant Health Risk Register homepage is updated with a notice, under “Risk Register News”, every time an entry is added or updated, including when the entry for *P. shantungensis* was added. We are happy to include a regular item at

the PHAF to summarise entries that have been, or due to be, added or updated on the UK Plant Health Risk Register. We can also start to notify stakeholders via the UK Plant Health Information Portal when we get lots of interceptions of an emerging pest (similar to *P. shantungensis*) and update stakeholders during the PHAF meetings regarding any actions taken/planned in response to high interceptions. We will keep the processes for communicating such developments under review, including via the PHAF.

The HTA asked for transparency around plans to review this pest, as well as the schedule for reviewing other potentially damaging pests. The UK Plant Health Risk Register process is dynamic and assessments for pests are all kept under review in light of any new or revised risk assessments, pest interceptions, changes in pest distributions and other developments. Whenever a Risk Register entry is updated following a review of new developments, this is notified on the Plant Health Portal in accordance with the process described above.

The HTA also provided information about the significant costs incurred by industry due to the action taken against *P. shantungensis* in the UK in 2024, including costs of holding lorries at the border control posts for significant periods.

Strengthening biosecurity is a key priority for government. The actions that are taken to prevent the introduction of a pest or disease by the competent authority are risk-based and proportionate. Where a potential significant risk to UK biosecurity is identified, including through a preliminary assessment, this requires timely action to prevent harmful pest introduction and spread. We recognise that unfortunately, in cases such as *P. shantungensis*, the need for such actions can result in significant costs to businesses affected by interceptions. However, the aim of this approach is to protect wider industry and others from the highly damaging, long-term impacts that would arise from high-risk pests establishing in the UK.

Next steps

The responses received were generally supportive of the conclusions of the UK PHRG and provided valuable additional information to consider in assessing the level of risk and completing the final PRA. Having reviewed the new information provided, this does not affect the overall conclusion of the final PRA, or the recommendation made by the UK Plant Health Risk Group, but adjustments to the draft PRA will be made to reflect this new information and a final version will be published, in line with usual practice. On this basis, the UK Plant Health Risk Group recommendation, not to take statutory action against this pest, will be adopted.

I would like to thank those responding for taking the time to submit views on the stakeholder engagement. Your comments have been very valuable in helping to develop a policy position on this pest. I hope this letter demonstrates the reasoning behind our decision and that we have sought to find a solution which reflects the current position and

the views expressed from different stakeholders. We will be pleased to continue engaging with you about this pest.

If you have any views about how this review was handled, or its outcome, please let me know.

Yours faithfully,

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Recipients: Organisations listed below (excludes responses from private individuals)

- British Tomato Growers Association
- Horticultural Trades Association
- Invasive Pest and Disease Working Group for Soft Fruit and Cherries
- Wales Plant Health Evidence and Advisory Group
- An individual plant nursery