

# SUBMISSION ON

# Importing fresh pineapples for human consumption

25 August 2023

**To:** The Ministry for Primary Industries (MPI)

**Name of Submitter:** Horticulture New Zealand

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# OVERVIEW

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## Our submission

Horticulture New Zealand (HortNZ) thanks the Ministry for Primary Industries (MPI) for the opportunity to submit on the draft Import Health Standard for freshly decrowned pineapple for human consumption and welcomes any opportunity to continue to work with MPI to discuss our submission.

The details of HortNZ's submission and decisions we are seeking are set out below. Our submission is supported by:

- Citrus NZ
- Kiwifruit Vine Health
- New Zealand Feijoa Growers Association
- Onions NZ
- Persimmon Industry Council
- Pukekohe Vegetable Growers Association
- Tomatoes New Zealand
- Vegetables New Zealand Inc

# HortNZ's Role

## Background to HortNZ

HortNZ represents the interests of approximately 4,200+ commercial fruit and vegetable growers in New Zealand who grow around 100 different fruit and vegetables. The horticultural sector provides over 40,000 jobs.

There is approximately, 80,000 hectares of land in New Zealand producing fruit and vegetables for domestic consumers and supplying our global trading partners with high quality food.

It is not just the direct economic benefits associated with horticultural production that are important. Horticulture production provides a platform for long term prosperity for communities, supports the growth of knowledge-intensive agri-tech and suppliers along the supply chain; and plays a key role in helping to achieve New Zealand's climate change objectives.

The horticulture sector plays an important role in food security for New Zealanders. Over 80% of vegetables grown are for the domestic market and many varieties of fruits are grown to serve the domestic market.

HortNZ's purpose is to create an enduring environment where growers prosper. This is done through enabling, promoting and advocating for growers in New Zealand.

# Submission

## 1. Introduction

The Ministry for Primary Industries (MPI) seeks to amalgamate the existing seven pineapple schedules (Australia, Ecuador, Fiji, New Caledonia, Philippines, Thailand, and Vanuatu) into one standard (MPI, 2023a). MPI has reviewed the pest risk associated with pineapples from these countries, as well as new market access requests for fresh pineapple from Cook Islands, Costa Rica, Indonesia, Malaysia, Papua New Guinea, Panama, Samoa, Sri Lanka, Taiwan, and Tonga (MPI, 2023b). These revisions will replace the current schedules in MPI Standard 152.02, and the individual standards for pineapples from Ecuador, Fiji, Thailand, and Vanuatu.

The pineapple (*Ananas comosus*) is native to South America (Pardo et al. 2014), but pineapple production occurs in over 40 countries, with Brazil, Costa Rica, and the Philippines responsible for approximately one third of total global fresh pineapple production (Hikal et al. 2021). A variety of pests and diseases damage pineapple including mealybugs, thrips, mites, beetles, scale insects, nematodes, bacterial rots, fungi, and pathogens (Bartholomew et al. 2003; Illingworth, 1928; Rohrbach & Apt, 1986). Harvested whole pineapples that are not decrowned may also inadvertently harbour invasive plant seeds in the crown of the fruit (MPI, 2023b).

Many pests and diseases associated with pineapples could threaten the New Zealand horticulture sector if they were to establish in New Zealand. Many pineapple pests are polyphagous and have other fruit and vegetable hosts such as maize, tomato, onion, spinach, capsicum, peach, potato, and pea (MPI, 2023b).

MPI considers the proposed change of requiring all imported pineapples to be decrowned will benefit importers as they would no longer have border clearance issues from exotic weed seeds detected in the crown. New Zealand consumers are also expected to benefit from the proposed changes as greater quantities and varieties of pineapples are expected to be available for future purchase (MPI, 2023c).

While the perceived benefits to New Zealand are appealing, HortNZ carefully analyses any proposed changes to the importation requirements of fresh produce as they may carry unwanted pests e.g., plant pathogens that pose significant biosecurity risks to horticulture in New Zealand if they were to arrive and establish.

It is critical that all fresh produce pathways have the required pest risk assessment and appropriate phytosanitary measures to mitigate the risks posed by these biosecurity threats. HortNZ's submission raises several concerns regarding the Import Risk Analysis and Risk Management Proposal supporting the IHS, and these are detailed in the following sections.

## 2. Comments on the consultation process

HortNZ supports the approach taken by MPI to this consultation, particularly the availability of pre-consultation material and the early opportunity to meet and discuss the Import Risk Assessment. HortNZ acknowledges that MPI has made a conscious effort to improve the conciseness and readability of its documents following industry feedback received in correspondence and workshops over the last 12 months, as well as the effort that MPI has taken to break down the Import Risk Analysis (IRA) into sections with increasing levels of complexity and detail to suit the needs of the reader.

HortNZ is supportive of MPI's desire to seek continuous improvement and considers the new formatting of the consultation documents to be an improvement on previous examples. However, at 500 pages, the IRA presents a huge amount of information to be reviewed.

## 3. Comments on the proposed amendments

### 3.1 MPIs Pest Risk Analysis process

#### **(i) Hazard analysis - qualitative assessments**

MPI's Import Risk Analysis process includes two stages - hazard identification and pest risk assessment (MPI 2023b). MPI defines a hazard as a pest meeting all three of the following criteria (MPI 2003b) i.e., the pest:

- is not present in New Zealand (or is present but still represents a biosecurity risk, e.g., is capable of vectoring pathogens not present in New Zealand), and
- has the ability to establish and cause harm in New Zealand, and
- is associated with imported risk goods and import pathways.

However the IRA document describes a further step in the Import Risk Analysis process, a filtering of hazards that will not be subject to the pest risk assessment step. This filtering process appears to be a quasi-risk assessment, but without any substantive documentation of technical justification provided (at the time of their exclusion from further analysis) about what organisms had been considered, but excluded, and why. MPI "decided to further assess any pests that met the following criteria.

- a) The pest or disease is associated with fresh pineapple fruit (of any variety and ripeness, excluding overripe), which meets the commodity description; and
- b) The pest or disease is present in any of the markets included in the project; and
- c) The pest or disease has traits that indicate it may not be adequately managed by the commodity description (including decrowning and commercial production methods); and
- d) The pest or disease is able to become established in New Zealand; and/or
- e) The pest or disease has the potential to cause significant impacts (sociocultural, economic, environmental, human health)."

On this basis, any pest that fails to meet one of these 5 criteria is filtered out of the pest risk analysis process and is “excluded” from further analysis and deemed to be effectively managed by the commodity description/ basic measures.

Importantly, point (e) introduces the qualitative measure of significance. MPI’s three criteria for defining a hazard requires that the pest has the ability to cause harm in New Zealand, whereas point (e) redefines this as having *the potential to cause significant impacts*. The “Summary of taxa excluded at hazard identification” (MPI, 2023) briefly describes the reasons why pests were excluded at this stage, and reveals that qualitative assessments have also been made in relation to the ability of pests to establish in New Zealand, concluding several pests are unlikely to establish.

This additional level of qualitative assessment results in many pests being filtered out and excluded from the formal pest risk assessment process, with very limited documentation of the technical justification for exclusion of these pests.

**HortNZ requests that qualitative assessments of impact or risk are documented and shared as part of the pest risk assessment process (including for organisms that are excluded from further analysis), and that criteria such as significant impacts are clearly defined.**

**(ii) Combining risk and impact ratings, and applying phytosanitary measures**

MPI’s hazard identification process identified 16 pest species that required a full Pest Risk Analysis (PRA). Of these 16 pests, MPI determined that additional measures (country freedom, MPI-recognised non-host, or pest-free areas of production) were only justifiable for the oriental fruit fly (*Bactrocera dorsalis*) which has the rankings of Moderate for Risk and Low for Uncertainty (MPI, 2023b).

HortNZ notes that the bacteria species *Dickeya zae* and *Pantoea ananatis* also have Moderate ratings for Risk, however MPI are not proposing any additional measures for these pathogens even though they have the same risk ranking as *B. dorsalis* (but a slightly higher uncertainty level).

It is also unclear how MPI combines likelihood and impact assessments. Perhaps this is described in the MPI document Guidelines for Risk Analysis in Plant Biosecurity 1.0, however this document was not made available for the consultation. For example, In the case of *Pantoea ananatis*

- two Moderate and two High assessments in the likelihood and impact assessment combined to Moderate, however
- for uncertainty, three Moderate assessments and one High assessment combined to High.

HortNZ also notes inconsistency between the proposed phytosanitary measures proposed for *Pantoea ananatis* and current requirements for this pest on other host crops. MPI is proposing that Basic Measures are sufficient to manage pest risk in the fresh decrowned pineapple pathway, however onions from China require Targeted Measures for this pest.

**HortNZ requests further explanation of the way likelihood and impact assessments are combined, and how MPI determines which ‘moderate’ risk organisms do or do not warrant targeted or MPI specified measures.**



**HortNZ is also concerned that the determination that the moderate risk posed by *P. ananatis* can be managed by basic measures may set a precedent for risk management of other moderate risk pests.**

HortNZ would also further highlight the inconsistency applied to the risk categorisation for *B. dorsalis* between MPI's documents. *Bactrocera dorsalis* is listed as a 'Moderate' risk pest in the IRA however, in section 4.1.4 of the RMP, *B. dorsalis* is described as a 'high-risk' pest (MPI, 2023c).

### ***(iii) Regulatory status of excluded pests***

Several hundred pests are excluded from further analysis at MPI's hazard identification stage. The criteria for exclusion and the results of the hazard assessment process are described in the IRA (MPI 2023). In broad terms pest are excluded because they won't be associated with imported pineapples, or they are not quarantine pests. This is an important distinction that impacts on the regulatory status of the excluded pests.

Pests that are not present in the exporting country or are not associated with fresh decrowned pineapple fruit (but meet the other requirements as a quarantine pest) may remain regulated pests, but should not be detected during phytosanitary inspection. However if they are, it is important that there is an ability to trigger a review of the risk posed by the pest and modify the IHS. At present Appendix 1 of the IRA (MPI 2023) does not provide enough information to clearly determine the status of this group of pests should they be intercepted, and it is not clear how a feedback mechanism would operate to trigger a review.

The other group of excluded pests are those that are not quarantine pests on the basis that:

- The pest is not able to become established in New Zealand, or
- The pest does not have the potential to cause significant impacts (sociocultural, economic, environmental, human health).

However the IRA does not state whether these pests are considered by MPI to be quarantine pests or regulated pests in the fresh decrowned pineapple pathway. MPI also states that it does not intend to list regulated / non-regulated pests in the Import Health Standard.

**HortNZ requests that MPI confirms the regulatory status of each pest in the fresh decrowned pineapple import pathway, and lists this status and action to be taken on interception in the NZ Official Pest Register.**

### ***(iv) Interception data***

HortNZ is concerned that interception data may be incomplete due to poor identification of pests to species level. MPI hosted a workshop on the new pineapple IHS proposal with industry on 17 April 2023, and industry representatives raised concerns about pests excluded from assessment. MPI acknowledged that assessing groups such as mites was difficult due to a paucity of detected mites sent to MPI's Plant Health and Environment Laboratory (PHEL) for identification in the last 20 years and challenges with accurate morphological identification of mite species.

**HortNZ requests clarity from MPI on its use of interception data, such as frequency of detections at the New Zealand border in developing the initial potential hazard list**

**and in the subsequent filtering of this list into excluded pest and those subject to pest risk assessment.**

**HortNZ also requests a summary from MPI on what species have been detected at the border on imported pineapple in the last 20 years and from which approved countries.**

## **3.2 Specific pest concerns**

### **(i) Exclusion of *Thrips tabaci***

HortNZ considers quarantine pests such as *Thrips tabaci* were incorrectly excluded from further risk analysis by MPI.

MPI's import risk analysis excluded *T. tabaci* from pest risk assessment on the basis that "As there is not sufficient evidence to establish commodity association, the species was not assessed further" even though *T. tabaci* is one of five biosecurity pests that Australia has identified as being associated with freshly decrowned pineapples from Taiwan (DAWR, 2018).

HortNZ considers it unacceptable that a highly polyphagous species such as *T. tabaci*, which infests approximately 140 plant species including pineapple, has an extensive geographical distribution and vectors fungal and viral plant pathogens, is excluded from further pest risk assessment (Joy et al. 2013b; Pal et al. 2019).

HortNZ emphasises that Australia requires phytosanitary measures including methyl bromide fumigation for *T. tabaci* on the fresh pineapple pathway due to the host association between pineapple and *T. tabaci* and this pest's ability to vector orthospoviruses (BICON, 2023; DAWR, 2018).

Australia's risk analysis for freshly decrowned pineapples also identified the papaya mealybug (*Paracoccus marginatus*), Madeira mealybug (*Phenacoccus madeirensis*) and the cotton thrips (*Frankliniella schultzei*) as requiring the same additional measures as *T. tabaci* (DAWR, 2018).

It appears that Australia's risk analysis (DAWR, 2018) is not referenced in MPI's import risk analysis. HortNZ notes these quarantine pests were not considered in the list of 16 pest species that required further risk analysis even though our closest trading partner in Australia considers these serious threats.

**HortNZ requests that MPI reconsiders its list of identified pests requiring further risk analysis as certain species such as *T. tabaci* have been incorrectly omitted.**

### **(ii) Bacteria - *Dickeya zae* and *Pantoea ananatis***

HortNZ notes the pathogens *D. zae* and *P. ananatis* have not been detected at the New Zealand border in the last 20 years (MPI, 2023c). HortNZ agrees there is an argument for not implementing any additional measures for these pathogens on the fresh pineapple pathway as no detections of these pathogens have been recorded in the past 20 years.

However, this lack of detection may be because:

- By coincidence, pineapples have been exported from areas free of *D. zae* and *P. ananatis*, or with low pathogen pressure, which may not be the case for additional countries.



- New Zealand’s Import Health Standards have been entirely effective in ensuring that these pathogens do not reach New Zealand, or
- New Zealand’s inspection methods at the border are not appropriate to ensure effective detection of the pathogens, if present.

This is an important distinction, as MPI acknowledges that both pathogens can be latent and asymptomatic in pineapple plants and fruit with internal symptoms only detected through destructive sampling (MPI, 2023c). Asymptomatic host expression and an unverified latency period may permit these pathogens to remain undetected during commercial production and basic phytosanitary measures e.g., packhouse processes, crop monitoring, visual inspection, and cleaning, which MPI considers appropriate for reducing the risk of these bacteria on fresh pineapples (MPI, 2023c).

MPI makes the unusual statement that it did consider applying additional measures but could not justify the implementation of such additional measures as it would not provide any further assurance that these bacteria will be sufficiently managed on fresh decrowned pineapples (MPI, 2023c).

**HortNZ suggests that effective measures are available, such as pest-free areas (PFAs) or pest-free places of production (PFPPs) and requests that MPI clarifies why these options were not considered.**

HortNZ brings MPI’s attention to the extensive scientific review of *P. ananatis* recently conducted by the European Food Safety Authority (EFSA, 2023), and acknowledges this was most likely published after the completion of MPI’s IRA. The review includes information that further informs the assessment of risk posed by *P. ananatis* through the importation of pineapple fruit and other host commodities. Some important points include:

- The disease also most commonly affects maize, sorghum, rice, and eucalypt, but mango, melon, peach, strawberry and tomato.
- Maize seed and onion seed were considered to be the main pathways for entry of *P. ananatis* into the EU.
- *P. ananatis* may be present inside fruits in their latent, exponential, or stationary phase: if bacteria are present in the last two phases, fruits are symptomatic.
- Although *P. ananatis* has a reasonably narrow host range it is also found in epiphytic and sometimes beneficial associations with weeds, and is a common member of the environmental microbiota.
- The EFSA Panel concluded that the pathogenic nature of *P. ananatis* is not fully established, *P. ananatis* is probably widely distributed in different ecosystems in the EU, and that economic impacts on most reported hosts are not expected, except on onions.

HortNZ has strong concerns that *P. ananatis* may pose a serious risk to many horticultural crops in New Zealand. However the EFSA review provides additional information that may add clarity to MPI’s assessment and reduce the level of uncertainty associated with the pest risk assessment for this pathogen.

HortNZ also notes there is inconsistency in the phytosanitary measures for *P. ananatis* that are applied to other imported commodities.

- Basic measures are required for importation of seed of maize and onion seeds, however EFSA (2023) considers these seeds to be a main pathway for entry of *P. ananatis*.
- Onions from China require Targeted Measures (agreed pest control measures)
- Onions from the USA require only basic measures for *P. ananatis*

**HortNZ requests that MPI fully reviews the risk of *P. ananatis* across all import pathways, taking into account the EFSA report, and applies phytosanitary measures in a consistent manner.**

### **(iii) *Fusarium verticillioides***

MPI has assessed the overall level of assessed risk to New Zealand from *F. verticillioides* on pineapple fruit to be Moderate with High uncertainty (MPI, 2023b). This is the result of combining the scores for likelihood and impact:

- The likelihood of *F. verticillioides* establishing in New Zealand is high, with low uncertainty.
- The overall impact is moderate, with high uncertainty.

It seems, therefore, to be quite certain that *F. verticillioides* will establish in New Zealand if it were to arrive with imported pineapple fruit.

The IRA also acknowledges that *F. verticillioides* will have a significant impact on maize and the commercial production of sweetcorn for processing. The IRA also assumes “that *F. verticillioides* is rarely a major cause of disease in hosts other than maize, there is moderate uncertainty in this conclusion because there is limited information available for each of these hosts, diseases caused by *Fusarium* species are common, and the agents are not always identified”.

Impacts in crops other than maize are considered to be negligible and impacts on crops other than maize are discounted from further assessment, despite MPI acknowledging there is moderate uncertainty about this. In other words, MPI is moderately uncertain that the impacts on other crops will be negligible and they could be higher.

The overall High level of uncertainty regarding impact therefore suggests that MPI is highly uncertain that the impact will only be Moderate, and not higher.

Despite there being a Moderate assessed level of risk *F. verticillioides* on pineapple fruit, MPI is proposing that Basic Measures will satisfactorily manage this risk (MPI, 2023c). This outcome is inconsistent with the application of Targeted Measures to *Bactrocera dorsalis*, for which the risk was also assessed as posing Moderate risk.

**HortNZ requests that MPI explains the technical justification for applying only Basic Measures to *F. verticillioides* and why this differs from the Targeted measures applied to another Moderate risk pest, *B. dorsalis*.**

HortNZ believes that Basic Measures are not sufficient to manage the risk of *F. verticillioides* on pineapples. MPI has acknowledged that if *F. verticillioides* is present on, or in, pineapples then *F. verticillioides* will almost certainly establish in New Zealand (“The likelihood of *F. verticillioides* establishing in New Zealand is high, with low uncertainty” - MPI, 2003).

**The Basic Measures proposed by MPI as effectively preventing imported pineapples from carrying *F. verticillioides* comprise of commercial growing methods and**

**packhouse procedures. HortNZ submits that these measures will not be effective in managing the risk of *F. verticillioides*.**

MPI proposed that “Crop monitoring, pest management processes and visual inspections before harvest will detect *F. verticillioides* disease outbreaks.”

This is based on an assumption that these activities will be implemented in the exporting country and be effective. While good commercial practice will aim to produce healthy crops, this will vary from grower to grower. As there is no export plan covering basic measures, MPI has no means of ensuring these activities are undertaken or effective. HortNZ believes this measure will not sufficiently manage risk.

MPI also proposes that “Packhouse processes (general processes for cleaning fruit, grading and visual inspection) are likely to remove *F. verticillioides* from the surface of fruit and exclude severely infected fruit from export.”

HortNZ agrees that effective grading practices will remove severely infected fruit, however *F. verticillioides* can be associated with all parts of the pineapple including the cores and internal fruitlets that would escape detection unless the fruit was cut along an axis that exposed the infected fruitlets (MPI, 2023b). HortNZ believes this measure will not sufficiently manage risk.

As part of the justification for Basic Measures, MPI states that “We have not detected *F. verticillioides* at the border in the last 20 years.” However this lack of detection in 20 years may suggest that on-arrival inspection is ineffective at detecting *F. verticillioides*.

MPI acknowledges that “given the evidence presented above, it is likely that *F. verticillioides* can be associated with asymptomatic pineapple fruit and remain latent in fruit stored at cold temperatures” ... “and the high likelihood that some *F. verticillioides* infections of pineapple fruit will remain undetected because symptoms are internal or the fruit is asymptomatic, even a low prevalence of infection would equate to a high likelihood of entry” (MPI, 2023b).

**HortNZ requests that MPI clarifies its pineapple inspection and testing procedures, particularly the number of samples that have been cut along an axis to expose any infected fruitlets and swabbed and laboratory tested.**

In considering the appropriateness of Basic Measures, Targeted Measures, or MPI Specified Measures, MPI states that “Applying additional measures would not provide any further assurance that these fungi will be sufficiently managed on fresh decrowned pineapples. Additional measures are not justified.”

HortNZ disagrees that additional measures would not provide any further assurance that these fungi will be sufficiently managed on fresh decrowned pineapples. Pest free area or pest free place of production would further reduce risk, and MPI does not appear to have considered these options.

HortNZ also disagrees that additional measures are not justified. It is HortNZ’s view that Basic Measures will not effectively manage risk and, if Basic Measures do not manage risk, additional measures are necessary and justified.

HortNZ acknowledges that phytosanitary measures should not be implemented if they make no significant contribution to manage risk. But if there are no available phytosanitary measures to adequately manage risk, an IHS should not be issued. Section 23(2) of the Biosecurity Act states that “If the officer considers that a

standard could effectively manage the risks, the officer may draft a proposed standard” and, by implication if an IHS cannot effectively manage risks an IHS should not be drafted.

**It is HortNZ’s view that Basic Measures are insufficient to effectively manage the risk posed by *F. verticillioides* and that MPI has not adequately assessed other available phytosanitary measures. However if it is MPI’s view that there are no available measures to effectively manage risk, the proposed IHS should be withdrawn.**

#### **(iv) Fruit flies**

*Bactrocera dorsalis* is one of the 16 species subject to full pest risk assessment. Fruit flies are of significant concern to New Zealand horticulture due to the impact they would have on production, domestic movement, and trade. For this reason the horticulture sector has established an Operational Agreement for fruit fly readiness and response with MPI, under the Government Industry Agreement on Biosecurity Readiness and Response.

MPI are proposing specific measures for *B. dorsalis* such as requiring all imported pineapples to be imported based on maturity only (“MPI-recognised non-host”). The rationale for the additional measure specific to *B. dorsalis* is that this pest has only been reported infesting overripe pineapples (MPI, 2023c).

The proposed implementation of this additional measure seeks to mitigate the risk of *B. dorsalis* by only permitting the importation of pineapples in the C1-C3 colour classification (MPI, 2023c). HortNZ are supportive of this additional measure as evidence in scientific literature supports *B. dorsalis* only infesting fruits such as pineapple, passion fruit and banana when late in the ripening stage (EFSA, 2021; Joy et al. 2013a; Kumar & Vishwakarma, 2017). Requiring approved countries to export only fresh decrowned pineapples in the C1-C3 colour classification will assist in mitigating the risk posed by *B. dorsalis* on this pathway.

**As there are several pineapple colour classifications available online, HortNZ would appreciate MPI noting the specific pineapple colour classification source they are referring to in a guidance box in the IHS or in the export plan to ensure the correct version is used.**

HortNZ notes that there are several other fruit fly species listed in current pineapple IHSs. These, and other, fruit flies are excluded from further pest risk assessment with only a short description of the rationale for exclusion. The phytosanitary measures specified in the current IHSs include:

- Non-host status based on maturity
- Non-host status based on commodity/variety
- Non-host status based on maturity/variety
- Non-host status based on stage of maturity (endemic fruit flies)
- Pineapples are permitted from Vanuatu at all stages of maturity. Testing has shown that pineapples are non-host to the economically important species of fruit fly present in Vanuatu.

The assessment of host status leading to the current IHS requirements appears to have been sufficiently detailed to have resulted in measures based on stage of maturity or variety or combinations of both (including no measures at all from Vanuatu).

**HortNZ requests that MPI include a section reviewing the current requirements for pineapples in relation to fruit flies and explains the technical justification for the removal of these requirements, or replacing them with by the overall stage of maturity criteria. Having this in one place would greatly assist clarity surrounding this very important group of pests.**

**(v) Mites**

At the MPI pre-consultation workshop (17 April 2023) industry representatives raised concerns about the exclusion of all mites (*Acari* spp) during the IRA process. As noted above, MPI stated that assessing mite species was difficult due to a paucity of detected mites sent to MPI's Plant Health and Environment Laboratory (PHEL) for identification in the last 20 years and challenges with accurate morphological identification of mite species.

**HortNZ has earlier noted concerns that few specimens are sent to PHEL for identification.**

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