Reasons for pest exclusion at hazard ID stage

On the consultation page, we identified six distinct reasons for excluding pests at the hazard identification (Hazard ID) stage:

1. Present in New Zealand
2. Not present in exporting countries
3. Not associated with the commodity
4. Likely to be visually detectable and effectively managed through commercial practices
5. Negligible risk of exposure and establishment arising from the commodity
6. Insufficient taxonomic information to enable reliable identification[1]

The sections below explain the meaning of each exclusion category and provide illustrative examples of how they have been applied in assessments. These examples draw on references from the list you provided via email on 10 April 2026. Please note that more than one category may apply to one pest.

1. Present in New Zealand

These pests were excluded because they are **already present in New Zealand** (based on BiotaNZ and PPIN: Plant Pest Information Network records. As such, they do **not meet the definition of a quarantine pest** for import risk analysis i.e., "The pest should be absent from all or a defined part of the Pest Risk Assessment area" according to the International Standard for Phytosanitary Measures No. 11 (IPPC 2013).

Reference:

International Plant Protection Convention (IPPC). (2013). *ISPM No. 11: Pest risk analysis for quarantine pests* (adopted 2013; ink amendments adopted 2017). Food and Agriculture Organization of the United Nations. https://www.ippc.int/static/media/files/publication/en/2017/05/ISPM_11_2013_En_2017-05-25_PostCPM12_InkAm.pdf

You can use the links below and type the species to find records of occurrence:

https://biotanz.landcareresearch.co.nz/

PPIN: Plant Pest Information Network | NZ Government

If you identify any inconsistencies regarding the presence of any of the listed species in New Zealand, please let us know.

Examples:

a. Botrytis cinerea

[1] You did not provide any examples in your list that fall within this group. However, this category generally includes entries where the taxonomic classification (for example, at the genus level) is too broad to support a robust assessment. In such cases, a single genus may comprise multiple species with markedly different biology, ecology, and behaviour, making it inappropriate to draw conclusions at that taxonomic level without species-specific information. Thus, no examples are provided.

BiotaNZ reports that *Botrytis cinerea* is present in New Zealand.

Reference:

Manaaki Whenua Landcare Research (ed.) (2026) *Biota of New Zealand*, *Botrytis cinerea Pers. 1794*. Available at: https://biotanz.landcareresearch.co.nz/scientific-names/1cb17fc2-36b9-11d5-9548-00d0592d548c (Accessed: 14 April 2026).

b. Colletotrichum acutatum (species complex)

PPIN reports that *Colletotrichum acutatum* is present in New Zealand on a wide variety of host plant species.

Reference:

MPI (no date) *PPIN database pest search: Colletotrichum acutatum*, *Mpi.govt.nz*. Available at: https://www.mpi.govt.nz/resources-and-forms/registers-and-lists/plant-pest-information-network (Accessed: 15 April 2026).

c. Otiorhynchus sulcatus

BiotaNZ reports that *Otiorhynchus sulcatusis* present in the wild in New Zealand.

Reference:

Manaaki Whenua Landcare Research (2011) *Biota of New Zealand*, *Otiorhynchus (Cryphiphorus) sulcatus (Fabricius, 1775)*. Available at: https://biotanz.landcareresearch.co.nz/scientific-names/59e38d4c-0e55-44cb-af93-80c1f2ff84f6 (Accessed: 14 April 2026).

2. Not present in exporting countries

These pests were excluded because **they do not occur in the producing areas of exporting markets considered** (Based on EPPO and CABI distribution records), meaning they **cannot enter the pathway.** The Import Health Standard will allow importation of blueberries from Chile, Mexico, Morocco, Peru, and USA only.

You can use the links below and type the species to find distribution maps and related information:

EPPO Global Database

CABI Digital Library - Home

Examples:

a. Bactrocera cucurbitae (preferred name *Zeugodacus cucurbitae*)

Information is given on the geographical distribution in ASIA: Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China (Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Hong Kong, Hubei, Hunan, Jiangsu, Jiangxi, Shanxi, Sichuan, Yunnan, Zhejiang), East Timor, India (Andaman and Nicobar Islands, Andhra Pradesh, Assam, Bihar, Delhi, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka,

Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttaranchal, Wast Bengal), Indonesia (Borneo, Irian Jaya, Java, Kalimantan, Nusa, Tenggara, Sulawesi, Sumatra), Iran, Laos, Malaysia (Peninsular Malaysia, Sabah, Sarawak), Myanmar, Nepal, Oman, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, United Arab Emirates, Vietnam; AFRICA: Benin, Burkina Faso, Burundi, Cameroon, Congo, Democratic Repulic of the Congo, Cote d'Ivoire, Ethiopia, Gambia, Ghana, Guinea, Kenya, Malawi, Mali, Mauritius, Mozambique, Niger, Nigeria, Reunion, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda; NORTH AMERICA: USA (Hawaii); OCEANIA: Christmas Island, Guam, Nauru, Northern Mariana Islands, Papua New Guinea, Solomon Islands, Timor-Leste (Bakri 2008; DMPP 2003; EPPO 1992).

References:

Bakri, A. (2008). *Bactrocera cucurbitae* (Melon Fly). CABI Compendium. Available online from: https://www.cabidigitallibrary.org/doi/10.1079/cabicompendium.17683#sec-7 (Accessed 15 April 2026)

DMPP, Distribution Maps of Plant Pests, doi:10.1079/DMPP/20066600064, (Map 64-), CABI International, *Bactrocera cucurbitae*. [Distribution map]., (2003). Bactrocera cucurbitae. [Distribution map]. | Distribution Maps of Plant Pests

European and Mediterranean Plant Protection Organization. (1992). EPPO Reporting Service (No. 07, Article 1992/13). https://gd.eppo.int/reporting/article-5278

b. Bactrocera dorsalis

Information is given on the geographical distribution in ASIA: Bangladesh, Bhutan, Brunei Cambodia, China (Anhui, Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hong Kong, Hubei, Hunan, Jiangsu, Jiangxi, Macao, Sichuan, Tibet, Yunnan, Zhejiang), East Timor, India (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal), Indonesia (Irian Jaya, Java, Kalimantan, Nusa Tenggara, Sulawesi, Sumatra), Laos, Malaysia (Peninsular Malaysia, Sabah, Sarawak), Myanmar, Nepal, Oman, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, United Arab Emirates, Vietnam; AFRICA: Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Congo Democratic Republic, Cote d'Ivoire, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe etc; NORTH AMERICA: USA (Hawaii); OCEANIA: Christmas Island, French Polynesia, Palau, Papua New Guinea, Timor-Leste (Manrakhan 2020)Ma).

References:

Manrakhan, A. (2020). *Bactrocera dorsalis* (Oriental Fruit Fly). CABI Compendium, 2020. Available online: https://www.cabidigitallibrary.org/doi/full/10.1079/cabicompendium.17685 (accessed on 15 April 2026).

3. Not associated with the commodity

These pests were excluded from further consideration because after comprehensive literature review, we found **no scientific evidence demonstrating a biological or pathway association with the commodity**, namely ripe blueberry fruit. This determination applies even where such pests are present in producing regions or are recognised pests of blueberry plants. Pests are considered not to be associated with the commodity if they are restricted to other plant parts (e.g. roots, stems, or foliage) or are found on other developmental stages of the commodity not traded (e.g. flowers or unripe fruit). Pests were also excluded where available evidence indicates that any association with the commodity is incidental, uncommon, or of negligible frequency. Accordingly, the assessed commodity does not constitute a plausible pathway for introduction of these pests (in addition to the risk being managed by commercial production practices).

Please note that exclusion is based on **absence of evidence.** If you have scientific evidence to demonstrate association with the commodity please share it.

Examples:

a. Hylamorpha elegans

No information was found that indicates adults feed on blueberry fruit (google scholar, checked 13/04/2026) but the species is listed as one of the pests of blueberry without any details in some publications such as Larrain et al. 2007 and Diez-Rodriguez et al. 2017. Adults feed on leaves on *Nothofagus* according to Lizana et al 2024. DROPSA PRA indicated that the adults were intercepted on imported blueberries but also noted that there is some uncertainty whether the adults will feed on blueberries or were contaminants. Suffert et al. (2018) listed the species as one of the species that could get into EPPO region through imported fresh blueberries, but no details were provided to prove association with the commodity.

In addition to lack of association with the commodity, this species was excluded due to likely visual detection. Adults are relatively big (11-15 mm) and brightly (green) coloured (Lazo, 2002) making them easily detectable at different points of the pathway and thus unlikely to enter New Zealand on commercially produced blueberry fruit.

References:

Diez-Rodriguez, G. I., Sosinski, E. E., Hubner, L. K., Antunes, L. E. C., & Nava, D. E. (2017). Entomofauna associated to different phenological stages on blueberry crop. Revista Brasileira de Fruticultura, 39(5), e-384. https://www.scielo.br/j/rbf/a/pQF3yfrGwmZs75Q7qjxJ77L/?format=pdf&lang=en

Suffert, M., Wilstermann, A., Petter, F., Schrader, G., & Grousset, F. (2018). Identification of new pests likely to be introduced into Europe with the fruit trade. EPPO Bulletin, 48(1), 144-154. https://www.eppo.int/media/uploaded_images/RESOURCES/special_projects/dropsa/Suffert_et_al-2018-DROPSA.pdf

Lizana, P., Mutis, A., Palma-Millanao, R., Larama, G., Antony, B., Quiroz, A., & Venthur, H. (2024). Transcriptomic and Gene Expression Analysis of Chemosensory Genes from White Grubs of *Hylamorpha elegans* (Coleoptera: Scarabaeidae), a Subterranean Pest in South America. Insects, 15(9), 660. https://www.mdpi.com/2075-4450/15/9/660

Lazo, W. (2002). Insectos de Chile. Atlas entomológico. Universidad de Chile. https://libros.uchile.cl/files/presses/1/monographs/420/submission/proof/54/

Larraín, A., Salas, F., & Graña, S. (2007). Plagas del arándano presentes en la región de Coquimbo. https://biblioteca.inia.cl/server/api/core/bitstreams/d8ee0868-44c2-4911-bfeb-ef471e2a3eee/content

European and Mediterranean Plant Protection Organization. (2015). *Hylamorpha elegans* (EPPO code: HYLAEL). EPPO DROPSA project. https://pra.eppo.int/organism/HYLAEL

b. Chileulia stalactitis

Chileulia stalactitis is a species of moth in the family Tortricidae, known to be a pest of agricultural crops, particularly grapes and stone fruits, in South America. No evidence found for association with blueberry plants or fruits (google scholar, checked 13/04/2026; Cepeda & Cubillos, 2011; Austin et al. 2025).

References*:*

Austin KA, Gilligan TM, Epstein ME. 2025. Tortricid ID: Tortricids of Agricultural Importance to the United States (Lepidoptera: Tortricidae). USDA APHIS-S&T-PITL Identification Technology Program (ITP), University of Hawai'i at Manoa (UHM), Colorado State University (CSU), the California Department of Food and Agriculture (CDFA), and Cornell University (CU). Fort Collins, CO. [Accessed on 13 April 2026] https://idtools.org/tortricid/index.cfm?packageID=1169&entityID=6994

Cepeda, D. E., & Cubillos, G. E. (2011). Description of the last larval stage and a compilation of host records, of seven species of Tortricids of economic importance in Chile (Lepidoptera: Tortricidae). https://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0717-65382011000100004

c. Heteroderes rufangulus

This is a soil-dwelling species whose larval stages feed on roots and underground plant material (USDA, 1987). There is no scientific evidence indicating biological association with blueberry fruit, including ripe fruit (google scholar, checked 13/04/2026). Interceptions appear to be incidental and likely due to contamination rather than indicative of a biological relationship with the commodity (CABI, 2022).

References:

United Stated Department of Agriculture – USDA, (1987). Pests not known to occur in the United States or of limited distribution: 80. A click beetle. 81-49 - Pests not known to occur in the United States or of limited distribution. 80. A click beetle - Biodiversity Heritage Library

CABI Compendium, doi:10.1079/cabicompendium.84155565, CABI, *Heteroderes rufangulus* (red-angled click beetle), (2022). https://doi.org/10.1079/cabicompendium.84155565

4. Negligible risk of exposure and establishment from the commodity

These pests were excluded because **the commodity pathway does not present a realistic risk of viable life stages transferring from imported fruit, which makes establishment unlikely**. This typically reflects biology (e.g., tissue specificity or vector dependence), life stage not associated with harvested material, inability to survive transport/handling, or restricted dispersal capacity.

Examples:

a. *Brevipalpus chilensis*

The DROPSA factsheet (EPPO, 2016), did not provide any information indicating that this mite is associated with, or has been intercepted on, blueberries. In addition, no supporting evidence of an association with blueberries was identified through a Google Scholar search (last checked 13 April 2026). The mite is considered most likely to occur as an incidental contaminant rather than being directly associated with the commodity, and thus unlikely to enter. Given its limited dispersal capacity and the low-waste nature of the pathway, the likelihood of exposure is assessed as negligible.

Accordingly, this species was excluded at the hazard identification stage on the grounds of both an unlikely commodity association and negligible risk of exposure.

References:

European and Mediterranean Plant Protection Organization. (2016). *Brevipalpus chilensis*. EPPO DROPSA project. https://gd.eppo.int/download/doc/1164_minids_BRVPCH.pdf

b. *Xylella fastidiosa*

MPI recently conducted an extensive risk assessment for this species (MPI 2025). While blueberry plants have been recorded as a *Xylella fastidiosa* host, it would be very unlikely that *Xylella* could enter NZ on imported blueberry fruit.

This bacterium is limited to colonising the xylem vessels - the vascular tissue responsible for transporting water and inorganic nutrients from the roots of plants to the shoots and leaves (EPPO 2026; CABI 2016). It is transmitted exclusively by insect vectors that feed on xylem fluid and is not carried by the eggs of these vector species (EPPO 2026; CABI 2016). Furthermore, *X. fastidiosa* is cold-sensitive and bacterial titre is reduced at low temperatures, reducing its likelihood to survive cold transit and storage (Purcell & Saunders 1995).

The MPI assessment identified movement of infected plants for planting as the main pathway for spread of *Xylella,* with fresh produce overall having a very low likelihood of entry and exposure (MPI 2025). Given that this species requires infected vectors that feed on xylem for transmission, and its cold sensitivity, the risk of exposure from

imported blueberry fruit is assessed as negligible (EPPO, 2026; CABI, 2016).

References:

CABI Compendium (2016) *Xylella fastidiosa* (Pierce's disease of grapevines) https://www.cabidigitallibrary.org/doi/full/10.1079/cabicompendium.57195

EPPO (2026) *Xylella fastidiosa*. EPPO datasheets on pests recommended for regulation. https://gd.eppo.int (accessed 2026-04-15)

Ministry for Primary Industries MPI (2025). *Risk assessment: Xylella fastidiosa* (Version 1). https://www.mpi.govt.nz/dmsdocument/70685/direct

Purcell, A H; Saunders, S R (1995) Harvested grape clusters as inoculum for Pierce's Disease. Plant Disease 79 :190–192.

c. *Grapholita packardi* syn. *Cydia packardi* (Cherry fruit worm).

Blueberry is an occasional host for this pest, where eggs are laid on terminal leaf shoots and larvae feed on the shoots and fruit. The larval stage causes stunted and dead shoots, as well as visible damage to the fruits including discoloration, boring, and early fruit drop. Infestation in-field will be detected and managed, while infested fruit would be removed from further processing due to visible symptoms. The mature larval stage pupates in crevices of woody branches, so exposure of this life stage on exported blueberries is negligible. The larvae could be transported on raw fruit but given the low-waste nature of this pathway, the likelihood of exposure from this species to a suitable host is assessed as negligible

References:

CABI Compendium, doi:10.1079/cabicompendium.17364, *Grapholita packardi* (cherry fruitworm), (2022) https://www.cabidigitallibrary.org/doi/full/10.1079/cabicompendium.17364

EPPO (2026) *Grapholita packardi*. EPPO datasheets on pests recommended for regulation. https://gd.eppo.int (accessed 2026-04-14)

5. Managed Risk

Species listed under this category are **likely to be visible, generate visible symptoms, or create other visible signs** (e.g., webbing) **that will enable their detection at different points during the pathway** (e.g., manual harvest, packaging, inspection, etc.) causing fruit to be either treated or rejected. Therefore, it is considered that biosecurity risks will be managed by commercial production practices and official phytosanitary inspection and certification.

a. Accuminulia buscki

When fully mature, larvae measure up to 12 mm (Cepeda 2014) being visually detectable. Eggs and early larval stages may be difficult to detect, but there is no evidence suggesting

these are associated with ripe blueberries. This moth appears to be a sporadic pest in blueberries, occurring in low densities, and the low likelihood of occurrence plus likely detection during commercial production practices will make the risk of entry negligible to very low.

Exposure likelihood is very low due to low waste from the pathway, low chance of survival during cold transit, and the need for multiple individuals to arrive together to mate and establish a population. The very low likelihoods of entry and exposure makes establishment unlikely.

DROPSA datasheet indicates that there were interceptions on blueberry fruit in USA and notes that while host status is uncertain the larvae do bore into blueberry fruit. Cepeda (2014) mentions that it is an occasional pest and has low population densities, without specifying which host this information is based on. Cepeda (2014) lists grapevine, plum, apricot and pear as economic hosts citing Brown (1999). Blueberry was not mentioned as a host by either Brown or Cepeda.

References:

European and Mediterranean Plant Protection Organization. (2016). *Accuminulia buscki* (Lepidoptera: Tortricidae). EPPO DROPSA project. https://gd.eppo.int/taxon/ACCUBU/documents

Brown, J. W. (1999). A new genus of tortricid moths (Tortricidae: Euliini) injurious to grapes and stone fruits in Chile. *Journal of the Lepidopterists' Society*, *53*(2), 60-64. https://images.peabody.yale.edu/lepsoc/jls/1990s/1999/1999-53(2)60-Brown.pdf

Cepeda, D. E. (2014). Descripción del último estado larvario de *Accuminulia buscki*, especie de Tortricidae (Lepidoptera; Euliini) de importancia económica en Chile. Revista Chilena de Entomología, 39, 23–27.

b. Argyrotaenia citrana

Visually detectable and managed by commercial production practices. Late instar larvae are 16 mm to 25 mm long and while younger larvae are smaller, typical symptoms associated with larval feeding such as silk webbing, rolling of leaves and frass will enable detection. Eggs are generally laid on leaves (Bouska & Edmunds 2025) but may also be occasionally laid on fruit (Gilligan & Epstein 2009). In the low likelihood event of eggs being laid on fruits, we expect that they will be detected, as they are laid in masses of up to 200. Larvae are not internal fruit feeders; later instars may feed on berry surface being easy to detect (Grousset et al. 2016 citing others). Larvae may contaminate mechanically harvested fruit but in the proposed IHS, the fruit is required to be hand-picked, limiting such contamination risk.

References:

Bouska, C., Edmunds, B. (2025). Blueberry pests. In: Kaur, N., editor. Pacific Northwest Insect Management Handbook [online]. Corvallis, OR: Oregon State University. https://pnwhandbooks.org/insect/small-fruit/blueberry (accessed 13 April 2026).

Gilligan, T. M., & Epstein, M. E. (2014). Tortricids of agricultural importance. *Interactive Keys developed in Lucid*, *3*. https://idtools.org/id/leps/tortai/Argyrotaenia_franciscana.htm

Grousset , F., Wistermann, A., Steffen, K., Petter, F., Schrader, G., Suffert, M. (2016) DROPSA Deliverable 1.3 Report for Vaccinium – Fruit pathway and Alert List. https://www.eppo.int/media/uploaded_images/RESOURCES/special_projects/dropsa/4_vaccinium_report.pdf

c. *Leptoglossus chilensis*

Visually detectable and managed by commercial production practices. Adults (~15mm long) and nymphs are mobile and occur in groups (nymphs) and will likely move away or be detected during harvesting (Cisternas 2013). Eggs are generally laid on twigs and leaves (Cisternas 2013). Eggs are also conspicuous (laid in characteristic chain like formation) aiding their detection. Generally, this pest occurs in low densities and sporadically (Cisternas 2013). Narrea Cango et al. (2022) lists the species as a blueberry pest but does not provide any details.

References:

Cisternas, E. (2013). Insectos plaga de importancia económica asociados al arándano. Manual *de arándano Boletín INIA*, *263*, 91-106. https://naturalis.fcnym.unlp.edu.ar/bitstreams/ef57f605-e36f-42a3-9784-72d6d17e272f/download

Narrea Cango, M., Huanuqueño Coca, E., Dilas-Jiménez, J. O., & Vergara Copacondori, J. A. (2022). Management of Chloridea virescens (Noctuidae) in blueberries (Vaccinium corymbosum L.) to promote sustainable cultivation in Peru: A Review. Peruvian Journal of Agronomy, 6(1), 78-89. https://doi.org/10.21704/pja.v6i1.1893