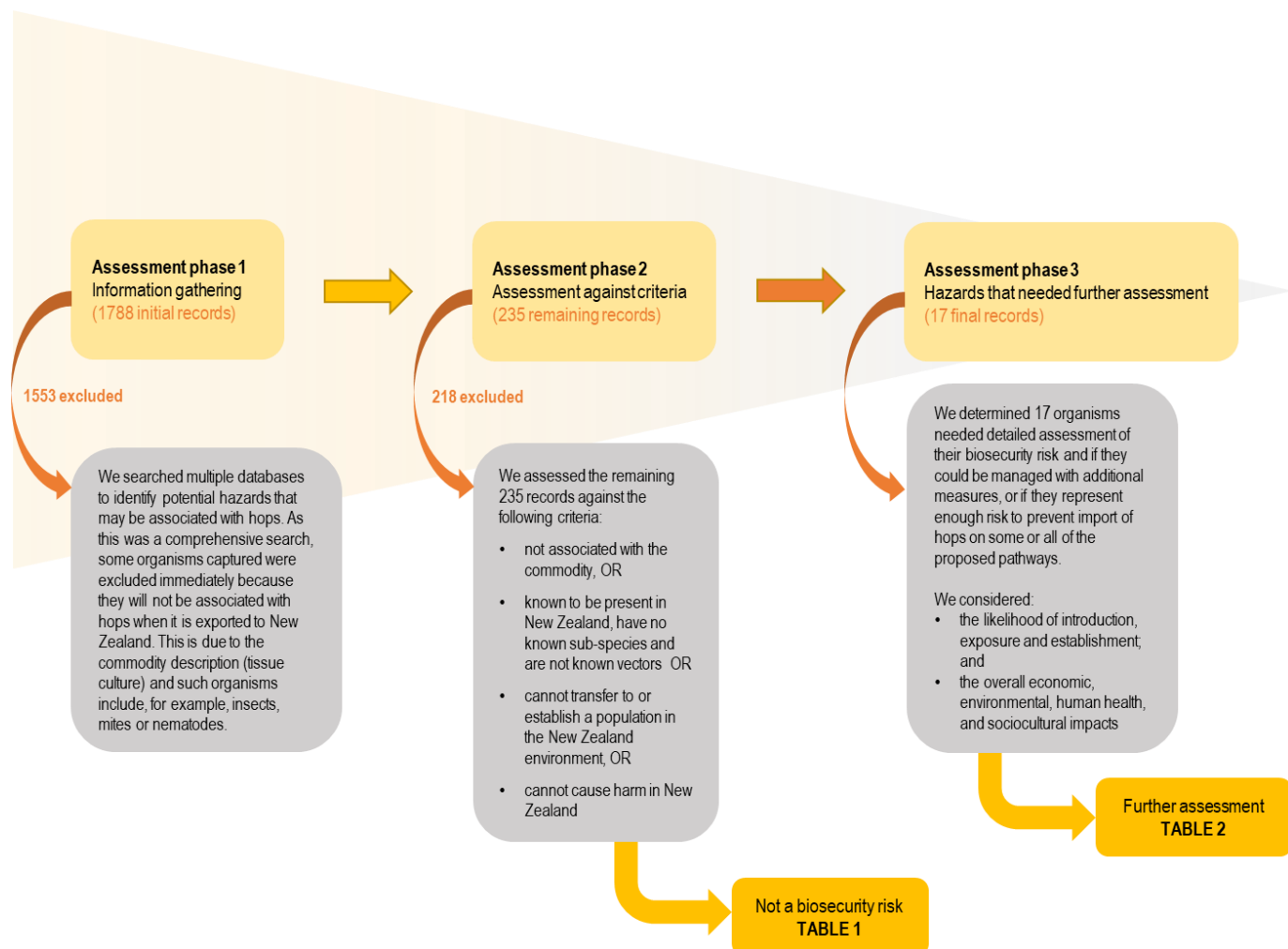


Hop plants for planting hazard identification

The diagram below outlines the process we followed to identify potential hazards that could pose biosecurity risks to New Zealand:



Summary of outcomes of hop plants for planting hazard identification

Table 1: Organisms that are not a biosecurity risk

If you believe any of these organisms do not meet any of the above criteria, please let us know and provide the evidence you have that supports your conclusion.

Organism name	Organism Group
'Candidatus Phytoplasma aurantifolia'	Phytoplasma
<i>Agrobacterium radiobacter</i>	Bacterium
<i>Agrobacterium rhizogenes</i>	Bacterium
<i>Agrobacterium tumefaciens</i>	Bacterium
<i>Corynebacterium</i>	Bacterium
<i>Corynebacterium humuli</i>	Bacterium
<i>Curtobacterium flaccumfaciens</i>	Bacterium
<i>Enterobacter cloacae</i>	Bacterium
<i>Pseudomonas cannabina</i>	Bacterium
<i>Pseudomonas syringae</i>	Bacterium
<i>Rhizobium rhizogenes</i>	Bacterium
<i>Xanthomonas campestris</i> pv. <i>cannabis</i>	Bacterium
Hop infectious sterility	Disease of Unknown Etiology
Hop stunt decline	Disease of Unknown Etiology
Rickettsia-like organism	Disease of Unknown Etiology
<i>Actinomucor elegans</i>	Fungus
<i>Aecidium</i>	Fungus
<i>Aecidium humuli</i>	Fungus
<i>Alternaria</i>	Fungus
<i>Alternaria alternata</i>	Fungus
<i>Alternaria arborescens</i>	Fungus
<i>Alternaria brassicicola</i>	Fungus
<i>Alternaria citri</i>	Fungus
<i>Alternaria humuli</i>	Fungus
<i>Alternaria humuli-scandens</i>	Fungus
<i>Alternaria infectoria</i>	Fungus
<i>Alternaria tenuissima</i>	Fungus
<i>Alternaria vitis</i>	Fungus
<i>Ampelomyces humuli</i>	Fungus
<i>Ampelomyces quisqualis</i>	Fungus
<i>Apiosporina morbosa</i>	Fungus
<i>Armillaria</i>	Fungus
<i>Armillaria mellea</i>	Fungus
<i>Arxiomyces vitis</i>	Fungus
<i>Ascochyta</i>	Fungus
<i>Ascochyta humuli</i>	Fungus
<i>Asteroma</i>	Fungus
<i>Aureobasidium</i>	Fungus
<i>Aureobasidium pullulans</i> var. <i>pullulans</i>	Fungus
<i>Biscogniauxia mediterranea</i>	Fungus
<i>Boeremia exigua</i>	Fungus
<i>Botryosphaeria</i>	Fungus
<i>Botryotinia fuckeliana</i>	Fungus
<i>Botrytis</i>	Fungus
<i>Botrytis cinerea</i>	Fungus
<i>Calophoma humuli</i>	Fungus
<i>Calycina discreta</i>	Fungus
<i>Capnodium citri</i>	Fungus
<i>Cercospora</i>	Fungus

Organism name	Organism Group
<i>Cercospora chenopodii</i>	Fungus
<i>Cercospora humuligena</i>	Fungus
<i>Cercospora humuli-japonici</i>	Fungus
<i>Ceriospora dubyi</i>	Fungus
<i>Cladosporium</i>	Fungus
<i>Cladosporium cladosporioides</i>	Fungus
<i>Cladosporium epiphyllum</i>	Fungus
<i>Cladosporium herbarum</i>	Fungus
<i>Cladosporium magnusianum</i>	Fungus
<i>Clavidisculum humuli</i>	Fungus
<i>Colletotrichum</i>	Fungus
<i>Colletotrichum acutatum</i>	Fungus
<i>Colletotrichum fioriniae</i>	Fungus
<i>Colletotrichum gloeosporioides</i>	Fungus
<i>Colletotrichum humuli</i>	Fungus
<i>Coniothyrium humuli</i>	Fungus
<i>Cudoniella</i>	Fungus
<i>Cyathicula cyathoidea</i>	Fungus
<i>Cylindrosporium cannabinum</i>	Fungus
<i>Cylindrosporium humuli</i>	Fungus
<i>Diaporthe sarmenticia</i>	Fungus
<i>Didymella aliena</i>	Fungus
<i>Didymella macrostoma</i>	Fungus
<i>Didymosphaeria</i>	Fungus
<i>Didymosphaeria futilis</i>	Fungus
<i>Didymosphaeria oblitescens</i>	Fungus
<i>Diplodia humuli</i>	Fungus
<i>Diplodia seriata</i>	Fungus
<i>Epicoccum nigrum</i>	Fungus
<i>Erysiphe cichoracearum</i>	Fungus
<i>Fumago</i>	Fungus
<i>Fusarium</i>	Fungus
<i>Fusarium avenaceum</i>	Fungus
<i>Fusarium crookwellense</i>	Fungus
<i>Fusarium culmorum</i>	Fungus
<i>Fusarium graminearum</i>	Fungus
<i>Fusarium humuli</i>	Fungus
<i>Fusarium oxysporum</i>	Fungus
<i>Fusarium roseum</i>	Fungus
<i>Fusarium venenatum</i>	Fungus
<i>Gibellulopsis nigrescens</i>	Fungus
<i>Gloeosporium</i>	Fungus
<i>Golovinomyces cichoracearum</i>	Fungus
<i>Golovinomyces orontii</i>	Fungus
<i>Golovinomyces spadiceus</i>	Fungus
<i>Grovesinia moricola</i>	Fungus
<i>Guignardia humulina</i>	Fungus
<i>Helicobasidium purpureum</i>	Fungus
<i>Helotium</i>	Fungus
<i>Hendersonia lupuli</i>	Fungus
<i>Hymenoscyphus humuli</i>	Fungus
<i>Hymenoscyphus humuli</i> var. <i>humuli</i>	Fungus
<i>Hypoderma commune</i>	Fungus
<i>Lachnella alboviolascens</i>	Fungus
<i>Lasiodiplodia theobromae</i>	Fungus
<i>Leptosphaeria acuta</i>	Fungus
<i>Leptosphaeria dumetorum</i>	Fungus
<i>Leptosphaeria sclerotioides</i>	Fungus

Organism name	Organism Group
<i>Leptosphaerulina australis</i>	Fungus
<i>Leptoxylum fumago</i>	Fungus
<i>Macrophomina phaseolina</i>	Fungus
<i>Macrosporium</i>	Fungus
<i>Macrosporium cocos</i>	Fungus
<i>Mortierella hyalina</i> var. <i>hyalina</i>	Fungus
<i>Mucor circinelloides</i>	Fungus
<i>Mucor hiemalis</i>	Fungus
<i>Mycocentrospora</i>	Fungus
<i>Mycosphaerella erysipina</i>	Fungus
<i>Neocosmospora rehmana</i>	Fungus
<i>Oidium</i>	Fungus
<i>Oidium erysipoides</i>	Fungus
<i>Paraphaeosphaeria sporulosa</i>	Fungus
<i>Penicillium corylophilum</i>	Fungus
<i>Penicillium glabrum</i>	Fungus
<i>Penicillium raistrickii</i>	Fungus
<i>Periconia</i>	Fungus
<i>Phacidiopycnis</i>	Fungus
<i>Phacidiopycnis padwickii</i>	Fungus
<i>Phacidiopycnis tuberivora</i>	Fungus
<i>Phloeospora humuli</i>	Fungus
<i>Phlyctema</i>	Fungus
<i>Phlyctaeniella humuli</i>	Fungus
<i>Phlyctema caulium</i>	Fungus
<i>Phoma</i>	Fungus
<i>Phoma herbarum</i>	Fungus
<i>Phoma herbarum</i> var. <i>humuli</i>	Fungus
<i>Phycomyces</i>	Fungus
<i>Phyllactinia</i>	Fungus
<i>Phyllactinia guttata</i>	Fungus
<i>Phyllosticta</i>	Fungus
<i>Phyllosticta bractearum</i>	Fungus
<i>Phyllosticta decidua</i>	Fungus
<i>Phyllosticta humuli</i>	Fungus
<i>Phyllosticta humuli</i> var. <i>major</i>	Fungus
<i>Phyllosticta lupulina</i>	Fungus
<i>Plenodomus humuli</i>	Fungus
<i>Pleospora herbarum</i>	Fungus
<i>Podosphaera fuliginea</i>	Fungus
<i>Pseudocercospora humulicola</i>	Fungus
<i>Pseudocercospora humuli-japonici</i>	Fungus
<i>Pseudopleospora petrakii</i>	Fungus
<i>Psilachnum tami</i>	Fungus
<i>Ramularia urticae</i>	Fungus
<i>Rhizoctonia solani</i>	Fungus
<i>Rhizomorpha subcorticalis</i>	Fungus
<i>Rosellinia necatrix</i>	Fungus
<i>Rosisphaerella rosicola</i>	Fungus
<i>Sclerophomella humuli</i>	Fungus
<i>Sclerotinia sclerotiorum</i>	Fungus
<i>Septoria</i>	Fungus
<i>Septoria divergens</i>	Fungus
<i>Septoria humuli</i>	Fungus
<i>Septoria humulina</i>	Fungus
<i>Septoria lupulina</i>	Fungus
<i>Sphaerella erysipina</i>	Fungus
<i>Sphaeria sarmentii</i>	Fungus

Organism name	Organism Group
<i>Sphaerotheca castagnei</i>	Fungus
<i>Stagonospora humuli-american</i>	Fungus
<i>Stagonosporopsis cucurbitacearum</i>	Fungus
<i>Synchytrium aureum</i>	Fungus
<i>Trichothecium roseum</i>	Fungus
<i>Truncatella angustata</i>	Fungus
<i>Verticillium albo-atrum</i> s.s.	Fungus
<i>Verticillium dahliae</i>	Fungus
<i>Verticillium tricorpus</i>	Fungus
<i>Xenodidymella humicola</i>	Fungus
<i>Globisporangium intermedium</i>	Oomycete
<i>Globisporangium mamillatum</i>	Oomycete
<i>Globisporangium ultimum</i>	Oomycete
<i>Phytophthora cactorum</i>	Oomycete
<i>Phytophthora citricola</i>	Oomycete
<i>Phytophthora cryptogea</i>	Oomycete
<i>Phytophthora plurivora</i>	Oomycete
<i>Phytopythium vexans</i>	Oomycete
<i>Plasmopara halstedii</i>	Oomycete
<i>Pseudoperonospora</i>	Oomycete
<i>Pseudoperonospora cubensis</i>	Oomycete
<i>Pythium</i>	Oomycete
<i>Pythium torulosum</i>	Oomycete
<i>Australian grapevine viroid</i>	Viroid
<i>Hop latent viroid</i>	Viroid
<i>Alfalfa mosaic virus</i>	Virus
<i>American hop latent virus</i>	Virus
<i>Apple mosaic virus</i> (ApMV-H)	Virus
<i>Apple mosaic virus</i> (ApMV-I)	Virus
<i>Beet western yellows virus</i>	Virus
<i>Carlavirus</i>	Virus
<i>Carnation mottle virus</i>	Virus
<i>Cherry leaf roll virus</i>	Virus
<i>Cucumber mosaic virus</i>	Virus
<i>Hop latent virus</i>	Virus
<i>Hop mosaic virus</i>	Virus
<i>Hop virus</i>	Virus
<i>H-246 Hop virus</i>	Virus
<i>Humulus japonicus latent virus</i>	Virus
<i>Plum pox virus</i>	Virus
<i>Prunus necrotic ringspot virus</i>	Virus
<i>Raspberry bushy dwarf virus</i>	Virus
<i>Satellite tobacco mosaic virus</i> (STMV)	Virus
<i>Strawberry latent ringspot virus</i>	Virus
<i>Tobacco mosaic virus</i>	Virus
<i>Tobacco necrosis satellite virus</i> (STNV-1)	Virus
<i>Tobacco necrosis satellite virus</i> (STNV-2)	Virus
<i>Tobacco necrosis satellite virus</i> (STNV-C)	Virus
<i>Tobacco necrosis virus A</i>	Virus
<i>Tobacco necrosis virus D</i>	Virus
<i>Tobacco ringspot virus</i>	Virus
<i>Tomato spotted wilt orthospovirus</i>	Virus
<i>Tomato yellow leaf curl virus</i>	Virus

Table 2: Hazards that need further assessment

Organism name	Organism Group
<i>'Candidatus Phytoplasma asteris'</i>	Phytoplasma
<i>Apple fruit crinkle viroid</i>	Viroid
<i>Arabis mosaic virus small satellite RNA</i>	Virus
<i>Ascochyta humuliphila</i>	Fungus
<i>Cercospora 'sp. Q.'</i>	Fungus
<i>Citrus bark cracking viroid</i>	Viroid
<i>Diaporthe humulicola</i>	Fungus
<i>Fusarium luffae</i>	Fungus
<i>Fusarium meridionale</i>	Fungus
<i>Hop stunt viroid</i>	Viroid
<i>Petunia asteroid mosaic virus</i>	Virus
<i>Phaeomycoentrospora cantuariensis</i>	Fungus
<i>Podospaera macularis</i>	Fungus
<i>Pseudocercospora humuli</i>	Fungus
<i>Pseudoperonospora humuli</i>	Oomycete
<i>Verticillium nonalfalfae</i>	Fungus
<i>Xylella fastidiosa</i>	Bacterium