ENVIRONMENTAL RISK MANAGEMENT AUTHORITY DECISION

Amended under s67A on 1 October 2006, 30 October 2006, 6 September 2007, 15 February 2008, 12 March 2008 and 16 February 2011 Decision reconsidered on 28 July 2015, 16 September 2016 and 23 February 2018

21 December 2000

Application codes NOC99014

Refer to Appendix 1 for applicant details.

Application type Import into Containment any New Organism under

section 40(1)(a) of the Hazardous Substances and New Organisms (HSNO) Act 1996, made in accordance with section 259 for the approval of existing new

microorganisms.

Consideration period 18 – 30 October 2000

Considered by Special Committee of the Authority appointed under

section 19(2)(b) of the HSNO Act 1996.

Decision

The application is **Approved with Controls**.

The organisms approved for the application are the microorganisms listed in Appendix 2 to this decision.

Application Process

Refer to Appendix 1 for details of the application processes.

The application was not required under the Act to be publicly notified.

The documents available for the evaluation and review of the application by ERMA New Zealand included the application and information from discussions held with the Department of Conservation and the Ministry of Agriculture and Forestry.

As the group of applications originally considered involved both genetically modified and non-modified organisms a special committee was established by the Authority to combine members from both the GMO and Non-GMO Standing Committees. The Special Committee of the Authority was appointed in accordance with section 19(2)(b) of the Hazardous Substances and New Organisms (HSNO) Act 1996. The committee comprised members of the Authority: Mrs Helen Hughes (Chair), Dr Lindie Nelson and Professor Barry Scott.

Relevant Legislative Criteria

The applications sought approval in accordance with section 259 of the HSNO Act 1996 to maintain in containment, and to re-import into containment, microorganisms held as reference specimens for reference and national and international research programmes. These organisms were lawfully imported into New Zealand before July 1998, and the application was made under Part V of the HSNO Act 1996, to bring previously lawful practice into line with HSNO requirements. Section 259 applies to existing microorganisms, where no permit was held that could be deemed to be an approval under section 241(1) or (3) of the Transitional Provisions (Part XVI) of the HSNO Act.

The applications were lodged pursuant to section 40(1)(a) of the HSNO Act. The decisions were determined in accordance with section 45, after taking into account the additional matters under sections 37 and 44 of the HSNO Act, and those relevant matters under Part II of the HSNO Act.

Consideration of the applications followed the relevant provisions of the Hazardous Substances and New Organisms (Methodology) Order 1998, but with particular regard to clauses 8 (dealing with the scale and significance of the risks, costs and benefits) and 26 (dealing with applications where the risks are negligible).

Reasons for the Decision

Purpose

The Committee considered that the purpose of the applications (refer to Appendix 1) was to gain approval for existing collections of microorganisms for reference, and research programmes. In accordance with section 45(1)(a)(i) of the Act, the Committee determined that this was an appropriate purpose under section 39(1)(h).

Ability to Escape Containment

In accordance with section 44(b) the Committee considered the ability of the organisms to escape from containment.

Currently the microorganisms are held in containment at the applicants' research facilities throughout New Zealand. The locations are either approved under MAF's Transitional Facilities Standard and MAF/ERMA New Zealand Standard 154.03.02: Containment Facilities for Micro-organisms, or are in the process of gaining approval under Standard 154.03.02. The facilities will all require approval at physical containment level 1 or 2, depending on the organisms in the collections. All the containment facilities require approval by MAF under the MAF/ERMA Standard 154.03.02: Containment Facilities for Microorganisms.

In some facilities, for logistical simplicity, all the microorganisms (of both Risk Group 1 and 2¹ as defined in the Australian/New Zealand Standard 2243.3:2002⁴, Safety in Laboratories: Part 3: (Microbiology) are held at the higher level PC2 containment.

The Committee notes that these collections have been maintained for many years without reported instances of unintended or accidental release from containment. The collections are of pure cultures, which are used in laboratories, and are handled by researchers with experience in microbiology. The Authority understands that most of the collections are held *ex situ* on artificial media or under extremely low temperatures (e.g. minus 80°C) and cannot simply escape or be accidentally released.

The Committee concludes that, taking into account the laboratory procedures proposed by the applicants and the containment controls imposed in this decision, it is very unlikely that the microorganisms could escape from the containment facility.

Establishment of self-sustaining populations and ease of eradication

In accordance with sections 37(a) and (b) of the HSNO Act the Committee considered the ability of the organisms to establish undesirable self-sustaining populations, which might cause adverse effects and the ease with which any such populations could be eradicated in the event of any escape from containment.

Many of the microorganisms and GMOs are laboratory strains, that require specialised culture regimes and/or growth factors to survive, and so have a low likelihood of survival outside of the laboratory. Some of the organisms held in the collections may already occur within the environment, so that any escape from containment is unlikely to have a significant effect. Some of the microorganisms do not have their hosts in New Zealand, or their hosts are either locally distributed or uncommon so that in the event of an escape, access of propagules to the host and therefore establishment will both be unlikely.

Many other variables, including climate and the life stage of the organism will also determine the ability for an escaped pathogen to establish an infection.

If microorganisms did escape and establish self-sustaining populations it is likely that only disease causing pathogenic organisms would be detected because of their adverse effects on host plants or animals. In this situation there would be potential for control of the pathogens with pesticides. However, in the event of soil microorganisms establishing self-sustaining populations it is unlikely that they would be detected and therefore little opportunity is available to control the spread or attempted eradication. Also any control mechanism for escaped soil organisms, which are detected, could have adverse impacts on the natural soil microbiota.

¹ **Risk group 1:** (low individual and community risk) Microorganisms that are unlikely to cause human, plant or animal disease (as defined in the Australia New Zealand Standard - Safety in laboratories Part 3: Microbiology 2243:3 1995).

Risk Group 2: (moderate individual risk, limited community risk) A pathogen that can cause human, plant or animal disease, but is unlikely to be a serious hazard to laboratory workers, the community, livestock, or the environment; laboratory exposures may cause infection, but effective treatment and preventative measures are available, and the risk of spread is limited (as defined in the Australia New Zealand Standard - Safety in laboratories Part 3: Microbiology 2243:3 1995).

The Committee concludes that in the unlikely event of any **self-sustaining population** of microorganisms, particularly soil microorganisms becoming established, the organisms would be difficult to eradicate, in most cases.

The Committee notes that the applicants are required, as part of the facility registration to maintain an internal Containment Manual, which must include contingency plans detailing the procedures to be implemented to deal with the spillage of any microorganisms within and outside the facility and for fire or other emergencies that may compromise containment.

Potential adverse effects

The Committee considered the potential adverse effects of the microorganisms on the environment and public health. Any effects can only be realised should the organisms escape, survive and establish self sustaining populations, or should laboratory staff come in contact with harmful microorganisms.

Environment

In identifying and assessing the risks associated with these applications the applicants have relied on the fact that these organisms are classified as Risk Group 1 and/or Risk Group 2 organisms, and therefore are unlikely to cause human, plant or animal disease (Risk Group 1) or are unlikely to be serious hazards to laboratory workers, the community, livestock or the environment (Risk Group 2).

Many of the organisms in these collections have been held in containment for many years and, to the best of the applicants' knowledge, have not had an adverse effect on the environment or human health.

Some of the microorganisms may be able to infect native or exotic flora or fauna, and some may occur on genera that are found in New Zealand. Consequently, in the event of an escape from containment there is the potential for the microorganisms to establish and have an adverse effect on native or valued exotic flora.

Public health

The Committee notes that many of the organisms in these collections have already been held in containment for many years and, to the best of the applicants' knowledge, have not had adverse effects on human health. Good microbiological practice will minimise the potential for any human pathogens included in this approval to infect laboratory workers.

Ethical Considerations

The Committee acknowledges that some of the genetically modified organisms held in these collections contain genetic material sourced from humans. As far as could be ascertained no human genetic material is sourced from Māori.

The applications are not for the development of GMOs but for the maintenance of existing collections of GMOs developed either internationally or in New Zealand. The Committee considered that any ethical approvals required for the future use and further development or re-importation of the GMOs would be covered by the importing institutions' ethical guidelines and Institutional Biological Safety Committee (IBSC) delegation requirements.

Inseparable Organisms

In accordance with section 45(1)(a)(ii) the Committee considered the effects of any inseparable organisms. As noted above the applicants explained that all the collections are of pure cultures.

Some applicants have noted that the possibility of inseparable organisms being present in imported cultures could not be excluded. The Committee notes that since the organisms are imported or held as "pure" cultures, contaminating organisms would be readily noticed in many cases. The Committee considers that, in this application, any inseparable organisms are very unlikely to pose risks, given that the organisms are very unlikely to escape containment under the specified containment controls.

Negligible Risk

Based on the consideration and analysis of adverse effects to the environment and public health, and taking into account the requirements for containment and that specialist research staff handle the organisms, the Committee considers that the risks associated with the maintenance and importation into containment of the microorganisms listed in Appendix 2 are negligible.

Benefits

The Committee has identified the primary benefit as being the increase in scientific knowledge as through using the microorganisms for national and international research and for reference purposes. The Committee is satisfied that costs are unlikely to accrue to parties other than the applicants.

Conclusion

The microorganisms are required to be contained in facilities that are registered, operated and managed in accordance with MAF/ERMA New Zealand Standard 154.03.02: Containment Facilities for Microorganisms, at physical containment level PC1 for Risk Group 1 organisms or PC2 for Risk Group 2 organisms, and the additional controls imposed in this decision.

Having considered the possible effects of the organism in accordance with sections 45(1)(a)(ii) and (iii) of the HSNO Act, the Committee is satisfied that the proposed containment regime and additional controls can adequately contain the microorganisms.

The Committee concludes that the risks arising from maintaining and importing the microorganisms into containment for reference and research purposes are negligible. Therefore, the Committee has considered this application in terms of clause 26 of the Methodology.

Taking into account the containment controls, the Committee considers that the beneficial effects of having the organisms in containment outweigh the likely adverse effects of the organisms and any inseparable organisms, should they escape. In this case, the fact that the applications have been made indicates that the benefits to the applicant outweigh the costs. The Committee is satisfied that costs are unlikely to accrue to parties other than the applicant. The application is approved subject the following controls in accordance with sections 45(1)(a) and 45(2) of the HSNO Act.

Controls

- 1. To limit the likelihood of any accidental release of any organism or any viable genetic material²:
- 1.1 The construction and operation of the various containment facilities ("the facility") in which the genetically modified and non-genetically modified microorganisms (as listed in Appendix 2) are maintained and re-imported into shall be in accordance with the:
 - a) Ministry of Agriculture and Forestry (MAF) Biosecurity Authority/ERMA New Zealand Standard 154.03.02³: *Containment Facilities for Microorganisms*.
 - b) Australian/New Zealand Standard AS/NZS 2243.3:2002⁴ Safety in Laboratories: Part 3: (Microbiological aspects and containment facilities), at **Physical Containment Level 1 (PC1) for organisms in Risk Group 1**⁵.
 - c) Australian/New Zealand Standard AS/NZS 2243.3:2002⁴ Safety in Laboratories: Part 3: (Microbiological aspects and containment facilities), at Physical Containment Level 2 (PC2) for organisms in Risk Group 2⁵.
- 1.2 The containment facilities shall be approved by MAF in accordance with the MAF Biosecurity Authority/ERMA New Zealand Standard 154.03.02³, and the controls of the Authority.
- 1.3 The minimum requirement for packaging for transportation of the microorganisms by all modes (ie. air, land and sea) from overseas and for transfers between facilities the organism shall be according to Packaging Instruction No. 650 of the International Air Transport Association (IATA) Dangerous Goods Regulations (refer to MAF/ERMA New Zealand Standard 154.03.02³). All containers must be clearly labelled with the name, address and phone number of both the sender and the recipient.
- 1.4 All practical and feasible measures shall be taken to ensure viable fungal material, including spores, are contained and do not leave the containment facility through any outlets including exhaust system, air filters and water discharge. This control may be met by ensuring that all work with any sporulating or potentially sporulating fungi occurs in a biological safety cabinet of Class II, in which any water used is sterilised before disposal. Other methods may also be available to achieve this control.

² Viable Genetic Material is biological material that can be resuscitated to grow into tissues or organisms. It can be defined to mean biological material capable of growth even though resuscitation procedures may be required, eg when organisms or parts thereof are sublethally damaged by being frozen, dried, heated, or affected by chemical.

³ Or any updated Standard approved by ERMA New Zealand

⁴ Or any updated version endorsed by ERMA New Zealand

⁵ As identified in organism descriptions of Appendix 2 to this decision

2. To exclude unauthorised people from the facility

2.1 Construction and operation of the containment facility shall comply with the requirements contained in the standards listed in control 1.1 relating to identification of entrances, numbers of and access to entrances, and security requirements for the entrances and the facility.

3. To exclude other organisms from the facility and to control undesirable and unwanted organisms within the facility

3.1 Construction and operation of the containment facility shall comply with the standards listed in control 1.1 relating to exclusion of other organisms from the facility and the control of undesirable and unwanted organisms within the facility.

4. To prevent unintended release of the organism by experimenters working with the organism

4.1 Construction and operation of the containment facility shall comply with the requirements of the standards listed in control 1.1 relating to the prevention of unintended release of the organism by experimenters working with the organism.

5. To control the effects of any accidental release or escape of an organism

- 5.1. Construction and operation of the containment facility shall comply with the requirements contained in the standards listed in control 1.1 relating to controlling the effects of any accidental release or escape of an organism.
- 5.2. If a breach of containment occurs the Facility Operator must ensure that the MAF Inspector⁶ responsible for supervision of the facility has received notification of the breach within 24 hours.
- 5.3. In the event of any breach of containment the contingency plan for the attempted retrieval or destruction of any viable material of the organisms that have escaped shall be implemented immediately. The contingency plan shall be included in the containment manual in accordance with MAF/ERMA New Zealand Standard 154.03.02³: Containment Facilities for Microorganisms.

6. Inspection and monitoring requirements for containment facilities

- 6.1. The operation of the containment facility shall comply with the requirements contained in the standards listed in control 1.1 relating to the inspection and monitoring requirements for containment facilities.
- 6.2. The Authority, or its authorised agent or properly authorised enforcement officers, may inspect the facilities at any reasonable time.
- 6.3. The containment manuals shall be updated, as necessary, to address the implementation of the controls imposed by this approval, in accordance with MAF/ERMA New Zealand Standard 154.03.02³: Containment Facilities for Microorganisms.

⁶ An inspector appointed under the Biosecurity Act

Qualifications required of the persons responsible for implementing those controls

- 7.1. The operation of the containment facility shall comply with the requirements contained in the standards listed in control 1.1 relating to the training of personnel working in the facility.
- 7.2. The person in charge of a particular research area and/or the person in charge of the operation of the containment facility shall inform all personnel involved in the handling of the organisms of the Authority's controls.

	Date: 21 December 2000
Mrs Helen Hughes, Chair	
Special Committee of the Authority	

Amendments:

August 2006;

- to split the 19 applications from one decision to enable section 67A amendments to be made to individual decisions
- update of the containment facility references in the controls to the most recent MAF/ERMA technical standards and correct the Australian/New Zealand containment facility references to "future proof" the decisions
- to remove duplicate organisms that have been approved on prior approvals

Dr Kieran Elborough
Acting Chair, New Organisms Standing Committee

Date: 1 October 2006

Amendments: October 2006; NOC99014 decision amended to remove <i>Lactobacillus plantarum</i> (Orla-Jensen 1919) Bergey et al 1923 from Appendix 2 as it has been determined via S2606005 determination to be not a new organism
Dr Kieran Elborough Acting Chair, New Organisms Standing Committee Date: 30 October 2006
Amendment August 2007 Amend decision to remove the following organism determined to be not new organisms through application \$2607002: Bacillus megaterium. To change the approval code for Pseudomonas aureofaciens from GMD000583 to
MOC002509 6 September 2007 Dr Max Suckling Date Chair of New Organisms Standing Committee
Amendment January 2008 Amend decision to remove the following organisms determined to be not new organisms through application S2607007: Nitrobacter winogradskyi and Nitrosomonas europaea
15 February 2008 Dr Max Suckling Date Chair of New Organisms Standing Committee
Amendment March 2008 Amend decision to remove <i>Aztobacter vinelandii</i> and <i>Streptomyces cellulosae</i> as they were determined to be not a new organism through application \$2608002.
12 March 2008 Dr Max Suckling Date Chair of New Organisms Standing Committee

Amendment January 2011

Amend decision to remove the following organisms determined to be not new organisms, through non-statutory advice:

Curtobacterium flaccumfaciens flaccumfaciens, Rhizobium etli, Rhizopus oligosporus

16 February 2011

Dr Max Suckling Date
Chair of New Organisms Standing Committee

Reconsideration of specific organisms

On 28 July 2015, the Committee elected to remake the decision on the organisms listed below. The Committee found that the organisms did not meet the definition of a new organism, therefore the Committee decided to decline to use their discretionary power under section 45 of the HSNO Act to approve the containment application for those organisms, noting that it was outside their authority to do so.

Organisms not approved for import into containment:

Auricularia cornea

Chromobacterium lividum (synonym = Janthinobacterium lividum)

Erwinia chrysanthemi (all subspecies)

Plectosphaerella cucumerina

Pleurotus ostreatus

Pseudomonas syringae (all subspecies)

Rhizopus oligosporus

Streptomyces albus

Streptomyces griseus

Thiobacillus thioparus

Xanthomonas campestris (all subspecies)



Dr Deborah Read Chair, Decision Making Committee Environmental Protection Authority

Date: 28 July 2015

Reconsideration of decision

On 16 September 2016, the Committee elected to remake the decision on the organism *Acetobacter aceti*. The Committee found that the organism did not meet the definition of a new organism, therefore the Committee decided to decline to use their discretionary power under section 45 of the HSNO Act to approve the containment application for *Acetobacter aceti*, noting that it was outside their authority to do so.



Dr Louise Malone Chair, Decision Making Committee Environmental Protection Authority

Date: 16 September 2016

Reconsideration of decision

On 23 February 2018, the Committee elected to remake the decision on the organism *Mesorhizobium plurifarium*. The Committee found that the organism did not meet the definition of a new organism, therefore the Committee decided to decline to use their discretionary power under section 45 of the HSNO Act to approve the containment application for *Mesorhizobium plurifarium*, noting that it was outside their authority to do so.



Dr Kerry Laing Chair, Decision Making Committee Environmental Protection Authority

Date: 23 February 2018

Decision Appendix 1 – Application details

Application Code	NOC99014	
Applicant	Landcare Research Limited	
	Contact: Dr John Young	
Purpose	To gain approval in accordance with section 259 of the HSNO Act 1996 for the International Collection of Microorganisms from Plants (ICMP) for use as reference organisms for rapid responses in eradication.	

Date Received	First received 31/08/1999	
	Resubmitted 22/05/2000	
Date Verified	07/07/2000	

Decision Appendix 2 –List of Approved Organisms

Application: NOC99014

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
NOC002509	NOC99014	Pseud. aureofaciens	Pseudomonas aureofaciens	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC000767	NOC99014	Fusarium proliferatum	Fusarium proliferatum	Landcare Research International Collection of Micro-organisms from Plants - Plant Pathogenic Bacteria and Fungi Risk Group: 2
NOC000866	NOC99014	Phytophthora colocasiae	Phytophthora colocasiae	Landcare Research International Collection of Micro-organisms from Plants - Plant Pathogenic Bacteria and Fungi Risk Group: 2 AND HORTRESEARCH PLANT PATHOGENS (FUNGI) AT MT ALBERT Strain: 9306,Pc30, Pc31, Pc25, Pc26, Pc27, Pc28, Pc32, Pc33, Pc34, Pc35, Pc1, Pc2, Pc3, Pc4, Pc5, Pc6, Pc7, Pc8, Pc9, Pc20, Pc21, Pc22, Pc23, Pc24, Pc36, Pc10, Pc11, Pc12, Pc13, Pc14, Pc15 Virus type/Host: Taro Origin: W. Samoa, Guam. Hawaii, Papua New Guinea, Pohnpei, Samoa Date of Accession: 6/08/93, 1998-99 Risk Group 2
NOC000900	NOC99014	Ulocladium atrum	Ulocladium atrum	Landcare Research International Collection of Micro-organisms from Plants - Plant Pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Thiobacillus thioparus	Thiobacillus thioparus	University of Waikato International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Strain: DSM 505 Origin: Germany Risk Group: 1
Not approved	NOC99014	Pleurotus ostreatus	Pleurotus ostreatus	Landcare Research International Collection of Micro-organisms from Plants - Plant Pathogenic Bacteria and Fungi Risk Group: 2
NOC001652	NOC99014	A. macrocytogenes	Azomonas macrocytogenes	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
Not approved	NOC99014	Acetobacter aceti	Acetobacter aceti	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001654	NOC99014	Acetobacter hansenii	Acetobacter hansenii	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001655	NOC99014	Acetobacter liquefaciens	Acetobacter liquefaciens	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001656	NOC99014	Acetobacter pasteurianus	Acetobacter pasteurianus	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001657	NOC99014	Acid. avenae avenae	Acidovorax avenae avenae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies – avenae

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
NOC001658	NOC99014	Acid. avenae citrulli	Acidovorax avenae citrulli	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - citrulli
NOC001659	NOC99014	Acidovorax facilis	Acidovorax facilis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001660	NOC99014	Acidovorax konjaci	Acidovorax konjaci	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001661	NOC99014	Acremonium uncinatum	Acremonium uncinatum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001662	NOC99014	Agaricus tabularis	Agaricus tabularis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001663	NOC99014	Agrobacterium rubi	Agrobacterium rubi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001664	NOC99014	Agrobacterium vitis	Agrobacterium vitis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001665	NOC99014	Alternaria padwickii	Alternaria padwickii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001666	NOC99014	Armillaria mellea	Armillaria mellea	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001667	NOC99014	Ascochyta caulina	Ascochyta caulina	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001668	NOC99014	Aspergillus flavus	Aspergillus flavus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Auricularia cornea	Auricularia cornea	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001670	NOC99014	Azo.tri. macrocytogenes	Azomonotrichon macrocytogenes	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001671	NOC99014	Azomonas agilis	Azomonas agilis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001672	NOC99014	Azorhizobium caulinodans	Azorhizobium caulinodans	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001673	NOC99014	Azorhizophilus paspali	Azorhizophilus paspali	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001674	NOC99014	Azospirillium lipoferum	Azospirillium lipoferum	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
NOC001675	NOC99014	Azospirillum brasiliense	Azospirillum brasiliense	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001676	NOC99014	Azot. macrocytogenes	Azotobacter macrocytogenes	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001677	NOC99014	Azotobacter paspali	Azotobacter paspali	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001680	NOC99014	Botryosph. xanthocephala	Botryosphaeria xanthocephala	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001681	NOC99014	Brady. liaoningense	Bradyrhizobium liaoningense	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001682	NOC99014	Bradyrhizobium elkani	Bradyrhizobium elkani	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001683	NOC99014	Burk. gladioli agaricicola	Burkholderia gladioli agaricicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies – agaricicola
NOC001684	NOC99014	Burk. gladioli gladioli	Burkholderia gladioli gladioli	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies – gladioli
NOC001685	NOC99014	Burkholderia caryophylli	Burkholderia caryophylli	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001686	NOC99014	Burkholderia glumae	Burkholderia glumae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001687	NOC99014	Burkholderia plantarii	Burkholderia plantarii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001688	NOC99014	C. flaccumfaciens betae	Curtobacterium flaccumfaciens betae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - betae
NOC001689	NOC99014	C. flaccumfaciens oortii	Curtobacterium flaccumfaciens oortii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies – oortii
Not approved	NOC99014	camp. brunneivaginae	Xanthomonas campestris brunneivaginae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - brunneivaginae
Not approved	NOC99014	camp. desmodiigangetici	Xanthomonas campestris desmodiigangetici	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - desmodiigangetici

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
Not approved	NOC99014	camp. desmodiirotundifolii	Xanthomonas campestris desmodiirotundifolii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - desmodiirotundifolii
Not approved	NOC99014	camp. maculifoliigardeniae	Xanthomonas campestris maculifoliigardeniae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - maculifoliigardeniae
Not approved	NOC99014	camp. nakataecorchori	Xanthomonas campestris nakataecorchori	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - nakataecorchori
Not approved	NOC99014	camp. pennamericanum	Xanthomonas campestris pennamericanum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - pennamericanum
Not approved	NOC99014	campestris amaranthicola	Xanthomonas campestris amaranthicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - amaranthicola
Not approved	NOC99014	campestris amorphophalli	Xanthomonas campestris amorphophalli	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - amorphophalli
Not approved	NOC99014	campestris aracearum	Xanthomonas campestris aracearum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - aracearum
Not approved	NOC99014	campestris azadirachtae	Xanthomonas campestris azadirachtae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - azadirachtae
Not approved	NOC99014	campestris desmodiilaxiflori	Xanthomonas campestris desmodiilaxiflori	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - desmodiilaxiflori
Not approved	NOC99014	campestris dieffenbachiae	Xanthomonas campestris dieffenbachiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - dieffenbachiae
Not approved	NOC99014	campestris gummisudans	Xanthomonas campestris gummisundans	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - gummisudans
Not approved	NOC99014	campestris malvacearum	Xanthomonas campestris malvacearum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - malvacearum
Not approved	NOC99014	campestris musacearum	Xanthomonas campestris musacearum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - musacearum
Not approved	NOC99014	campestris nigromaculans	Xanthomonas campestris nigromaculans	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - nogromaculans

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Not approved	NOC99014	campestris papavericola	Xanthomonas campestris papavericola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - papavericola
Not approved	NOC99014	campestris phleipratensis	Xanthomonas campestris phleipratensis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - phleipratensis
Not approved	NOC99014	campestris physalidicola	Xanthomonas campestris physalidicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - physalidicola
Not approved	NOC99014	campestris spermacoces	Xanthomonas campestris spermacoces	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - spermacoces
Not approved	NOC99014	campestris thirumalacharii	Xanthomonas campestris thirumalacharii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - thirumalacharii
Not approved	NOC99014	campestris trichodesmae	Xanthomonas campestris trichodesmae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - trichodesmae
Not approved	NOC99014	campestris vignaeradiatae	Xanthomonas campestris vignaeradiatae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vignaeradiatae
Not approved	NOC99014	campestris vitiscarnosae	Xanthomonas campestris vitiscarnosae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vitiscarnosae
Not approved	NOC99014	campestris vitiswoodrowii	Xanthomonas campestris vitiswoodrowii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vitiswoodrowii
Not approved	NOC99014	campestris zantedeschiae	Xanthomonas campestris zantedeschiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - zantedeschiae
NOC001716	NOC99014	carotov. betavasculorum	Erwinia carotovora betavasculorum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - betavascuorum
NOC001717	NOC99014	Ceratocystis paradoxa	Ceratocystis paradoxa	
NOC001718	NOC99014	Chromobact.violaceum	Chromobacterium violaceum	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001719	NOC99014	Chromobacteriumiodinum	Chromobacterium iodinum	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
Not approved	NOC99014	Chromobacterium lividum	Chromobacterium	Landcare Research

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			lividum	International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
Not approved	NOC99014	chrysanth. chrysanthemi	Erwinia chrysanthemi chrysanthemi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - chrysanthemi
Not approved	NOC99014	chrysanth. paradisiaca	Erwinia chrysanthemi paradisiaca	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - paradisiaca
NOC001723	NOC99014	Clavibact. xyli cynodontis	Clavibacter xyli cynodontis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cynodontis
NOC001724	NOC99014	Clavibacter iranicus	Clavibacter iranicus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001725	NOC99014	Clavibacter toxicus	Clavibacter toxicus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001726	NOC99014	Clavibacter tritici	Clavibacter tritici	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001727	NOC99014	Clavibacter xyli xyli	Clavibacter xyli xyli	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - xyli
NOC001728	NOC99014	Clostridium puniceum	Clostridium puniceum	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001729	NOC99014	Coccom. binnaburrensis	Coccomyces binnaburrensis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001730	NOC99014	Coccom. tympanibaculi	Coccomyces tympanibaculi	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001731	NOC99014	Coccomyces walkeri	Coccomyces walkeri	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001732	NOC99014	Cochlio. verruculosus	Cochliobolus verruculosus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001733	NOC99014	Cochliobolus miyabeanus	Cochliobolus miyabeanus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001734	NOC99014	Cochliobolus pallescens	Cochliobolus pallescens	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001735	NOC99014	Colletotrichum musae	Collectotrichum musae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001736	NOC99014	Comamonas terrigena	Comamonas terrigena	Landcare Research

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001737	NOC99014	Curvularia eragrostidis	Curvularia eragrostidis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001738	NOC99014	Curvularia ischaemi	Curvularia ischaemi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001739	NOC99014	Curvularia lunata aeria	Curvularia lunata aeria	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - aeria
NOC001740	NOC99014	Cylindrocarpon tenue	Cylindrocarpon tenue	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001741	NOC99014	Cylindrocladiella peruviana	Clyindrocladiella peruviana	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001742	NOC99014	Drechslera multiformis	Drechslera multiformis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	E. chrysanthemi parthenii	Erwinia chrysanthemi parthenii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - parthenii
NOC001744	NOC99014	E. herbicola gypsophilae	Erwinia herbicola gypsophilae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - gypsophilae
NOC001745	NOC99014	E. herbicola millettiae	Erwinia herbicola millettiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - millettiae
NOC001746	NOC99014	Enter. proteamaculans	Enterobacter proteamaculans	Landcare Research International Collection of Micro-organisms form Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001747	NOC99014	Enterobacter pyrinus	Enterobacter pyrinus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001748	NOC99014	Erwinia alni	Erwinia alni	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001749	NOC99014	Erwinia ananas ananas	Erwinia ananas ananas	· · · · · · · · · · · · · · · · · · ·
NOC001750	NOC99014	Erwinia ananas uredovora	Erwinia ananas uredovora	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - uredovora
NOC001751	NOC99014	Erwinia cacticida	Erwinia cacticida	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
NOC001752	NOC99014	Erwinia cancerogena	Erwinia cancerogena	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001753	NOC99014	Erwinia carnegiana	Erwinia carnegiana	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001754	NOC99014	Erwinia carotovora odorifera	Erwinia carotovora odorifera	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - odorifera
				(Note: The species Erwinia carotovora is recorded as present in NZ, collection reference ICMP 3645)
NOC001755	NOC99014	Erwinia carotovora wasabiae	Erwinia carotovora wasabiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - wasabiae
				(Note: The species Erwinia carotovora is recorded as present in NZ, collection reference ICMP 3645)
NOC001756	NOC99014	Erwinia dissolvens	Erwinia dissolvens	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001757	NOC99014	Erwinia cypripedii	Erwinia cypripedii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001758	NOC99014	Erwinia mallotivora	Erwinia mallotivora	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001759	NOC99014	Erwinia nigrifluens	Erwinia nigrifluens	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001760	NOC99014	Erwinia nimipressuralis	Erwinia nimipressuralis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001761	NOC99014	Erwinia persicinus	Erwinia persicinus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001762	NOC99014	Erwinia psidii	Erwinia psidii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001763	NOC99014	Erwinia quercina	Erwinia quercina	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001764	NOC99014	Erwinia rubrifaciens	Erwinia rubrifaciens	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001765	NOC99014	Erwinia salicis	Erwinia salicis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001766	NOC99014	Erwinia stewartii	Erwinia stewartii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001767	NOC99014	Erwinia tracheiphila	Erwinia tracheiphila	Landcare Research

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001768	NOC99014	F. oxysporum melongenae	Fusarium oxysporum melongenae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - melongenae
NOC001769	NOC99014	F. oxysporum perniciosum	Fusarium oxysporum perniciosum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - pernicilosum
NOC001770	NOC99014	F. oxysporum redolens	Fusarium oxysporum redolens	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - redolens
NOC001771	NOC99014	F. oxysporum vasinfectum	Fasrium oxysporum vasinfectum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vasinfectum
NOC001772	NOC99014	F. oxysporum zingiberi	Fusarium oxysporum zingiberi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - zingiberi
NOC001774	NOC99014	flaccum. poinsettieae	Curtobacterium flaccumfaciens poinsettieae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - poinsettieae
NOC001775	NOC99014	Fusarium anthophilum	Fusarium anthophilum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001776	NOC99014	Fusarium camptoceras	Fusarium camptoceras	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001777	NOC99014	Fusarium fusariodes	Fusarium fusariodes	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001778	NOC99014	Fusarium longipes	Fusarium longipes	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001779	NOC99014	Fusarium pallidoroseum	Fursarium pallidoroseum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001780	NOC99014	Fusarium reticulatum	Fusarium reticulatum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001781	NOC99014	Fusarium verticillioides	Fusarium verticillioides	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001782	NOC99014	Gibberella stilboides	Gibberella stilboides	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001783	NOC99014	Gloeosporium kaki	Gloeosporium kaki	Landcare Research International Collection of Micro-organisms from Plants - Plant

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				pathogenic Bacteria and Fungi Risk Group: 2
NOC001784	NOC99014	Glomerella cingulata minor	Glomerella cingulata minor	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - minor
NOC001785	NOC99014	Glomerella phomoides	Glomerella phomoides	·
NOC001786	NOC99014	Gluconobacter oxydans	Gluconobacter oxydans	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001787	NOC99014	Gnomonia rostellata	Gnomonia rostellata	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001788	NOC99014	Guianardia dracenae	Guianardia dracenae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001789	NOC99014	Hericium erinaceus	Hericium erinaceus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001790	NOC99014	Heterobasidion annosum	Heterobasidion annosum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001791	NOC99014	Hydrogen. pseudoflava	Hydrogenophaga pseudoflava	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001792	NOC99014	Hydrogenophaga palleroni	Hydrogenophaga palleroni	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001793	NOC99014	Hyphodonita tropica	Hyphodonita tropica	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001794	NOC99014	Hypomyces aureo-nitens	Hypomyces aureo- nitens	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001795	NOC99014	Kramasamuha sibika	Kramasamuha sibika	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001798	NOC99014	Lophoderm. actinothyrium	Lophodermium actinothyrium	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001799	NOC99014	M. brunnea brunnea	Marssonina brunnea brunnea	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - brunnea
NOC001800	NOC99014	M. brunnea trepdiae	Marssonina brunnea trepdiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - trepdiae

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NOC001801	NOC99014	Marssonina populi	Marssonina populi	University of Auckland International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001802	NOC99014	Mesorh. mediterraneum	Mesorhizobium mediterraneum	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001803	NOC99014	Mesorhizobium ciceri	Mesorhizobium ciceri	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
Not approved	NOC99014	Mesorhizobium plurifarium	Mesorhizobium plurifarium	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001805	NOC99014	michigan. nebraskensis	Clavibacter michiganensis nebraskensis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - nebraskensis
NOC001806	NOC99014	michigan. sepedonicus	Clavibacter michiganensis sepedonicus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - sepedonicus
NOC001807	NOC99014	michigan. tessellarius	Clavibacter michiganensis tessellarius	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - tessellarius
NOC001808	NOC99014	Micrococcus luteus	Micrococcus luteus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001809	NOC99014	Microdochium dimerum	Microdochium dimerum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001810	NOC99014	Mycoleptodiscus indicus	Mycoleptodiscus indicus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001811	NOC99014	Mycosph. zeae-maydis	Mycosphaerella zeae- maydis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001812	NOC99014	Nectria atrofusca	Nectria atrofusca	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001813	NOC99014	Nectria gracilipes	Nectria gracilipes	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001814	NOC99014	Nectria grammicospora	Nectria grammicospora	<u> </u>
NOC001815	NOC99014	Nectria rigidiuscula	Nectria rigidiuscula	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001816	NOC99014	Nectriella pironii	Nectriella pironii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2

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				International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi
NOC001819	NOC99014	Ophionectria trichospora	Ophionectria trichospora	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001820	NOC99014	P. megasperma glycines	Phytophthora megasperma glycines	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - glycines
Not approved	NOC99014	P. syringae atropurpurea	Pseudomonas syringae atropurpurea	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - atropurpurea
Not approved	NOC99014	P. syringae brussonetiae	Pseudomonas syringae brussonetiae	•
Not approved	NOC99014	P. syringae cannabina	Pseudomona syringae cannabina	pinus radiata
Not approved	NOC99014	Pseudomonas syringae castaneae	Pseudomonas syringae castaneae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - castaneae
Not approved	NOC99014	P. syringae ciccaronei	Pseudomonas syringae ciccaronei	Pinus radiata as modified by the NPTII gene for antibiotic resistance from E. coli and by the ScFv gene from Mus musculus anticipated to confer resistance to Dothistroma pini (plasmids: p7154, pCW122).
Not approved	NOC99014	P. syringae daphniphylli	Pseudomonas syringae daphniphylli	
Not approved	NOC99014	P. syringae dendropanacis	Pseudomonas syringae dendropanacis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - dendropanacis
Not approved	NOC99014	P. syringae eriobotryae	Pseudomonas syringae eriobotryae	<u> </u>
Not approved	NOC99014	P. syringae lachrymans	Pseudomonas syringae lachrymans	
Not approved	NOC99014	P. syringae morsprunorum	Pseudomonas syringae morsprunorum	•
Not approved	NOC99014	P. syringae philadelphi	Pseudomonas syringae philadelphi	
Not approved	NOC99014	P. syringae rhaphioledpidis	Pseudomonas syringae rhaphioledpidis	
Not approved	NOC99014	P. syringae striafaciens	Pseudomonas syringae striafaciens	

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - striafaciens
NOC001834	NOC99014	Penicillium funiculosum	Penicillium funiculosum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001835	NOC99014	Penicillium hirsutum	Penicillium hirsutum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001836	NOC99014	Penicillium jensenii	Penicillium jensenii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001837	NOC99014	Phialophora asteris	Phialophora asteris	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001838	NOC99014	Phoma destructiva	Phoma destructiva	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001839	NOC99014	Phoma eupyrena	Phoma eupyrena	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001840	NOC99014	Phoma macra	Phoma macra	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001841	NOC99014	Phoma multirostrata	Phoma multirostrata	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - avenae
NOC001842	NOC99014	Phoma negriana	Phoma negriana	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001843	NOC99014	Phoma putaminum	Phoma putaminum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001844	NOC99014	Phoma sorghina	Phoma sorghina	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001845	NOC99014	Phoma tropica	Phoma tropica	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001846	NOC99014	Phomopsis asparagi	Phomopsis asparagi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001847	NOC99014	Phytophthora megasperma medicaginis	Phytophthora megasperma medicaginis	International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - medicaginis
NOC001848	NOC99014	Piptoporus cretaceous	Piptoporus cretaceous	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001849	NOC99014	Pithom. valparadisiacus	Pithomyces valparadisiacus	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
		Pithomyces funiculosa	Pithomyces funiculosa	

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001851	NOC99014	Pithomyces graminicola	Pithomyces graminicola	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001852	NOC99014	Pithomyces karoo	Pithomyces karoo	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001853	NOC99014	Pithomyces maydicus	Pithomyces maydicus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001854	NOC99014	Pithomyces sacchari	Pithomyces sacchari	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
Not approved	NOC99014	Plectosph. cucumerina	Plectosphaerella cucumerina	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001856	NOC99014	Pleurotus abalonus	Pleurotus abalonus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001857	NOC99014	Pleurotus cystidiosus	Pleurotus cystidiosus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001858	NOC99014	Pleurotus sajor-caju	Pleurotus sajor-caju	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001859	NOC99014	Poly. tomentosus circinatus	Polyporus tomentosus circinatus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - circinatus
NOC001860	NOC99014	Pseud. aurantiaca	Pseudomonas aurantiaca	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001861	NOC99014	Pseud. blatchfordae	Pseudomonas blatchfordae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001862	NOC99014	Pseud. caricapapayae	Pseudomonas caricapapayae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001863	NOC99014	Pseud. chlororaphis	Pseudomonas chlororaphis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001864	NOC99014	Pseud. ficuserectae	Pseudomonas ficuserectae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi
NOC001865	NOC99014	Pseud. flavescens	Pseudomonas flavescens	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001866	NOC99014	Pseud. flectens	Pseudomonas flectens	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001867	NOC99014	Pseud. fuscovaginae	Pseudomonas fuscovaginae	Landcare Research International Collection of Micro-organisms from Plants - Plant

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				pathogenic Bacteria and Fungi Risk Group: 2
NOC001868	NOC99014	Pseud. hibiscicola	Pseudomonas hibiscicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001869	NOC99014	Pseud. mendocina	Psuedomonas mendocina	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001870	NOC99014	Pseud. resinovorans	Pseudomonas resinovorans	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001871	NOC99014	Pseud. savastanoi fraxini	Pseudomonas savastanoi fraxini	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - fraxini
NOC001872	NOC99014	Pseud. symploci	Psuedomonas symploci	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
Not approved	NOC99014	Pseud. syringae aceris	Pseudomonas syringae aceris	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - aceris
Not approved	NOC99014	Pseud. syringae actinidiae	Pseudomonas syringae actinidiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - actinidiae
Not approved	NOC99014	Pseud. syringae aesculi	Pseudomonas syringae aesculi	
Not approved	NOC99014	Pseud. syringae antirrhini	Pseudomonas syringae antirrhini	
Not approved	NOC99014	Pseud. syringae apii	Pseudomonas syringae apii	
Not approved	NOC99014	Pseud. syringae aptata	Pseudomonas syringae aptata	
Not approved	NOC99014	Pseud. syringae avellanae	Pseudomonas syringae avellanae	
Not approved	NOC99014	Pseud. syringae garcae	Pseudomonas syringae garcae	• •
Not approved	NOC99014	Pseud. syringae hibisci	Pseudomonas syringae hibisci	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Pseud. syringae lapsa	Pseudomonas svringae	Identified to Subspecies/Infrasubspecies - hibisci Landcare Research
Not approved	NOC99014	Pseud. syringae lapsa	Pseudomonas syringae	Landcare Research

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - Iapsa
Not approved	NOC99014	Pseud. syringae mellea		Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - mellea
Not approved	NOC99014	Pseud. syringae myricae	•	
Not approved	NOC99014	Pseud. syringae oryzae		
Not approved	NOC99014	Pseud. syringae papulans		Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - papulans
Not approved	NOC99014	Pseud. syringae photiniae		Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - photiniae
Not approved	NOC99014	Pseud. syringae ribicola	Pseudomonas syringae ribicola	
Not approved	NOC99014	Pseud. syringae sesami	Pseudomonas syringae sesami	<u> </u>
Not approved	NOC99014	Pseud. syringae tabaci	Pseudomonas syringae tabaci	<u> </u>
Not approved	NOC99014	Pseud. syringae tagetis	Pseudomonas syringae tagetis	
Not approved	NOC99014	Pseud. syringae theae	Pseudomonas syringae theae	
Not approved	NOC99014	Pseud. syringae tremae		
Not approved	NOC99014	Pseud. syringae ulmi		
Not approved	NOC99014	Pseud. syringae viburni	Pseudomonas syringae viburni	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
				Identified to Subspecies/Infrasubspecies - viburni

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
			zizaniae	International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - zizaniae
NOC001897	NOC99014	Pseud. vesicularis	Pseudomonas vesicularis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001898	NOC99014	Pseudomonas amygdali	Pseudomonas amygdali	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001899	NOC99014	Pseudomonas asplenii	Pseudomonas asplenii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001900	NOC99014	Pseudomonas betle	Pseudomonas betle	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001901	NOC99014	Pseudomonas marginalis alfalfae	Pseudomonas marginalis alfalfae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - alfalfae
NOC001902	NOC99014	Pseudomonas marginalis pastinacae	Pseudomonas marginalis pastinacae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - pastinacae
NOC001903	NOC99014	Pseudomonas meliae	Pseudomonas meliae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001904	NOC99014	Pseudomonas syzygii	Pseudomonas syzygii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001905	NOC99014	Pythium mamillatum	Pythium mamillatum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001906	NOC99014	Pythium periplocum	Pythium periplocum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001907	NOC99014	Rathayibacter iranicus	Rathayibacter iranicus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001908	NOC99014	Repetop. cambrense	Repetophragma cambrense	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001909	NOC99014	Rhizobacter daucus	Rhizobacter daucus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001911	NOC99014	Rhizobium fredii	Rhizobium fredii	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001912	NOC99014	Rhizobium galegae	Rhizobium galegae	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
NOC001913	NOC99014	Rhizobium hainanense	Rhizobium hainanense	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001914	NOC99014	Rhizobium huakuii	Rhizobium huakuii	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001915	NOC99014	Rhizobium huautlense	Rhizobium huautlense	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001916	NOC99014	Rhizobium medicae	Rhizobium medicae	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001917	NOC99014	Rhizobium mongolense	Rhizobium mongolense	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001918	NOC99014	Rhizobium tianshanense	Rhizobium tianshanense	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001919	NOC99014	Rhizobium tropici	Rhizobium tropici	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001921	NOC99014	Rigidoporous lineatus	Rigidoporous lineatus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001922	NOC99014	S. phaeochromogenes	Streptomyces phaeochromogenes	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001923	NOC99014	Sclerotium hydrophilum	Sclerotium hydrophilum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001924	NOC99014	Septocyta ruborum	Septocyta ruborum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001925	NOC99014	Septoria helianthi	Septoria helianthi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001926	NOC99014	Septoria helianthina	Septoria helianthina	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001927	NOC99014	Sesq. pseudosetosum	Sesquicillium pseudosetosum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001928	NOC99014	Sesquicillium buxi	Sesquicillium buxi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001929	NOC99014	Setosphaeria monoceras	Setosphaeria monoceras	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001930	NOC99014	Sinor. zinjiangensis	Sinorhizobium zinjiangensis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001931	NOC99014	Sinorhizobium fredii	Sinorhizobium fredii	Landcare Research

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
	3.5 2.5			International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001932	NOC99014	Sinorhizobium sahelense	Sinorhizobium sahelense	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001933	NOC99014	Sinorhizobium terangae	Sinorhizobium terangae	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001934	NOC99014	Sphaerostilbe ochracea	Sphaerostilbe ochracea	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001935	NOC99014	Sphaerostilbella lutea	Sphaerostilbella lutea	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001936	NOC99014	Strep. acidiscabies	Streptomyces acidiscabies	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001937	NOC99014	Streptococcus faecium	Streptococcus faecium	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001938	NOC99014	Streptomyces achromogenes	Streptomyces achromogenes	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001939	NOC99014	Streptomyces acidiscables	Streptomyces acidiscabies	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001940	NOC99014	Streptomyces albidofaciens	Streptomyces albidofaciens	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001941	NOC99014	Streptomyces albogriseolus	Streptomyces albogriseolus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001942	NOC99014	Streptomyces alboniger	Streptomyces alboniger	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001943	NOC99014	Streptomyces albosporeus	Streptomyces albosporeus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001944	NOC99014	Streptomyces arenae	Streptomyces arenae	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001945	NOC99014	Streptomyces argenteolus	Streptomyces argenteolus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001946	NOC99014	Streptomyces aureofaciens	Streptomyces aureofaciens	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001947	NOC99014	Streptomyces bellus	Streptomyces bellus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001948	NOC99014	Streptomyces bikiniensis	Streptomyces	Landcare Research

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
			bikiniensis	International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001949	NOC99014	Streptomyces cacaoi	Streptomyces cacaoi	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001950	NOC99014	Streptomyces californicus	Streptomyces californicus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001951	NOC99014	Streptomyces calvus	Streptomyces calvus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001952	NOC99014	Streptomyces candidus	Streptomyces candidus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001953	NOC99014	Streptomyces canus	Streptomyces canus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001955	NOC99014	Streptomyces chartreusus	Streptomyces chartreusus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001956	NOC99014	Streptomyces chrysomallus	Streptomyces chrysomallus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001957	NOC99014	Streptomyces coelicolor	Streptomyces coelicolor	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001958	NOC99014	Streptomyces collinus	Streptomyces collinus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001959	NOC99014	Streptomyces diastaticus	Streptomyces diastaticus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001960	NOC99014	Streptomyces echinatus	Streptomyces echinatus	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001961	NOC99014	Streptomyces exfoliatus	Streptomyces exfoliatus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001962	NOC99014	Streptomyces flaveolus	Streptomyces flaveolus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001963	NOC99014	Streptomyces flavidovirens	Streptomyces flavidovirens	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001964	NOC99014	Streptomyces fradiae	Streptomyces fradiae	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001965	NOC99014	Streptomyces fulvissimus	Streptomyces fulvissimus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1

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NOC001966	NOC99014	Streptomyces galilaeus	Streptomyces galilaeus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001967	NOC99014	Streptomyces griseolus	Streptomyces griseolus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001968	NOC99014	Streptomyces griseoruber	Streptomyces griseoruber	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001969	NOC99014	Streptomyces halstedii	Streptomyces halstedii	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001970	NOC99014	Streptomyces hygroscopicus	Streptomyces hygroscopicus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001971	NOC99014	Streptomyces intermedius	Streptomyces intermedius	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001972	NOC99014	Streptomyces ipomoeae	Streptomyces ipomoeae	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001973	NOC99014	Streptomyces lipmanii	Streptomyces lipmanii	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001974	NOC99014	Streptomyces matensis	Streptomyces matensis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001975	NOC99014	Streptomyces michiganensis	Streptomyces michiganensis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001976	NOC99014	Streptomyces microflavus	Streptomyces microflavus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001977	NOC99014	Streptomyces naganishii	Streptomyces naganishii	Landcare Research International Collection of Micro-organisms from Plants - Non-pathogenic Micro-organisms Risk Group: 1
NOC001978	NOC99014	Streptomyces narbonensis	Streptomyces narbonensis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001979	NOC99014	Streptomyces nitrosporeus	Streptomyces nitrosporeus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001980	NOC99014	Streptomyces niveus	Streptomyces niveus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001981	NOC99014	Streptomyces olivaceus	Streptomyces olivaceus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001982	NOC99014	Streptomyces parvulus	Streptomyces parvulus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
NOC001983	NOC99014	Streptomyces prasinopilosus	Streptomyces prasinopilosus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001984	NOC99014	Streptomyces prasinus	Streptomyces prasinus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001985	NOC99014	Streptomyces purpeofuscus	Streptomyces purpeofuscus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001986	NOC99014	Streptomyces purpurascens	Streptomyces purpurascens	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001987	NOC99014	Streptomyces ramulosus	Streptomyces ramulosus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001988	NOC99014	Streptomyces reticulatiscabiei	Streptomyces reticulatiscabiei	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001989	NOC99014	Streptomyces reticuli	Streptomyces reticuli	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001990	NOC99014	Streptomyces rimosus	Streptomyces rimosus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001991	NOC99014	Streptomyces roseochromogenus	Streptomyces roseochromogenus	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001992	NOC99014	Streptomyces scabeieuropaei	Streptomyces scabeieuropaei	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001993	NOC99014	Streptomyces scabieieuropaei	Streptomyces scabieieuropaei	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001994	NOC99014	Streptomyces scabies	Streptomyces scabies	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001995	NOC99014	Streptomyces setonii	Streptomyces setonii	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001996	NOC99014	Streptomyces stellatascabiei	Streptomyces stellatascabiei	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC001997	NOC99014	Streptomyces stellatiscabiei	Streptomyces stellatiscabiei	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001998	NOC99014	Streptomyces tendae	Streptomyces tendae	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC001999	NOC99014	Streptomyces violaceoniger	Streptomyces violaceoniger	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
NOC002000	NOC99014	Streptomyces wedmorensis	Streptomyces wedmorensis	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC002001	NOC99014	Streptomyces. violascens	Streptomyces violascens	Landcare Research International Collection of Micro-organisms from Plants - Non- pathogenic Micro-organisms Risk Group: 1
NOC002002	NOC99014	syringae cunninghamiae	Pseudomonas syringae cunninghamiae	E Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cunninghamiae
NOC002003	NOC99014	Verticillium nubilum	Verticillium nubilum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
NOC002004	NOC99014	Verticillium vilmorinii	Verticillium vilmorinii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	X. campestris manihotis	Xanthomonas campestris manihotis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - manihotis
Not approved	NOC99014	X. campestris aberrans	Xanthomonas campestris aberrans	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - aberrans
Not approved	NOC99014	X. campestris alangii	Xanthomonas campestris alangii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - alangii
Not approved	NOC99014	X. campestris alfalfae	Xanthomonas campestris alfalfae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - alfalfae
Not approved	NOC99014	X. campestris arecae	Xanthomonas campestris arecae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - arecae
Not approved	NOC99014	X. campestris argemones	Xanthomonas campestris argemones	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - argemones
Not approved	NOC99014	X. campestris armoraciae	Xanthomonas campestris armoraciae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - armoraciae
Not approved	NOC99014	X. campestris arracaciae	Xanthomonas campestris arracaciae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - arracaciae
Not approved	NOC99014	X. campestris arrhenatheri	Xanthomonas campestris arrhenatheri	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - arrhenatheri
Not approved	NOC99014	X. campestris asclepiadis	Xanthomonas campestris asclepiadis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				Identified to Subspecies/Infrasubspecies - asclepiadis
Not approved	NOC99014	X. campestris barbareae	Xanthomonas campestris barbareae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - barbareae
Not approved	NOC99014	X. campestris bauhiniae	Xanthomonas campestris bauhiniae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - bauhiniae
Not approved	NOC99014	X. campestris beticola	Xanthomonas campestris beticola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - beticola
Not approved	NOC99014	X. campestris bilvae	Xanthomonas campestri bilvae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - bilvae
Not approved	NOC99014	X. campestris biophyti	Xanthomonas campestris biophyti	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - biophyti
Not approved	NOC99014	X. campestris blepharidis	Xanthomonas campestris blepharids	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - blepharidis
Not approved	NOC99014	X. campestris boerhaaviae	Xanthomonas campestris boerhaaviae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - boerhaaviae
Not approved	NOC99014	X. campestris cannabis	Xanthomonas campestris cannabis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cannabis
Not approved	NOC99014	X. campestris carissae	Xanthomonas campestris carissae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - carissae
Not approved	NOC99014	X. campestris cassavae	Xanthomonas campestris cassavae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cassavae
Not approved	NOC99014	X. campestris catharanthii	Xanthomonas campestris catharanthii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - catharanthii
Not approved	NOC99014	X. campestris centellae	Xanthomonas campestris centellae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - centellae
Not approved	NOC99014	X. campestris cerealis	Xanthomonas campestris cerealis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cerealis
Not approved	NOC99014	X. campestris clerodendri	Xanthomonas campestris clerodendri	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				Identified to Subspecies/Infrasubspecies - clerodendri
Not approved	NOC99014	X. campestris clitoriae	Xanthomonas campestris clitoriae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - clitoriae
Not approved	NOC99014	X. campestris convolvuli	Xanthomonas campestris convolvuli	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - convolvuli
Not approved	NOC99014	X. campestris coracanae	Xanthomonas campestris coracanae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - coracanae
Not approved	NOC99014	X. campestris coriandri	Xanthomonas campestris coriandri	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - coriandri
Not approved	NOC99014	X. campestris corylina	Xanthomonas campestris corylina	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - corylina
Not approved	NOC99014	X. campestris cyamopsidis	Xanthomonas campestris cyamopsidis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cyamopsidis
Not approved	NOC99014	X. campestris daturae	Xanthomonas campestris daturae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - daturae
Not approved	NOC99014	X. campestris desmodii	Xanthomonas campestris desmodii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - desmodii
Not approved	NOC99014	X. campestris durantae	Xanthomonas campestris durantae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - durantae
Not approved	NOC99014	X. campestris erythrinae	Xanthomonas campestris erythrinae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - arythrinae
Not approved	NOC99014	X. campestris esculenti	Xanthomonas campestris esculenti	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - esculenti
Not approved	NOC99014	X. campestris eucalypti	Xanthomonas campestris eucalypti	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - eucalypti
Not approved	NOC99014	X. campestris euphorbiae	Xanthomonas campestris euphorbiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - euphorbiae
Not approved	NOC99014	X. campestris fascicularis	Xanthomonas campestris fascicularis	Landcare Research

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				Identified to Subspecies/Infrasubspecies - fascicularis
Not approved	NOC99014	X. campestris guizotiae	Xanthomonas campestris guizotiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - guizotiae
Not approved	NOC99014	X. campestris heliotropii	Xanthomonas campestris heliotropii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - heliotropii
Not approved	NOC99014	X. campestris hyacinthi	Xanthomonas campestris hyacinthi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - hyacinthi
Not approved	NOC99014	X. campestris ionidii	Xanthomonas campestris ionidii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - ionidii
Not approved	NOC99014	X. campestris lantanae	Xanthomonas campestris lantanae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - lantanae
Not approved	NOC99014	X. campestris lawsoniae	Xanthomonas campestris lawsoniae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - lawsoniae
Not approved	NOC99014	X. campestris lespedezae	Xanthomonas campestris lespedezae	Landcare Research
Not approved	NOC99014	X. campestris martyniicola	Xanthomonas campestris martyniicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - martyniicola
Not approved	NOC99014	X. campestris melhusi	Xanthomonas campestris melhusi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - melhusi
Not approved	NOC99014	X. campestris melonis	Xanthomonas campestris melonis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - melonis
Not approved	NOC99014	X. campestris merremiae	Xanthomonas campestris merremiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - merremiae
Not approved	NOC99014	X. campestris mirabilis	Xanthomonas campestris mirabilis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - mirabilis
Not approved	NOC99014	X. campestris obscurae	Xanthomonas campestris obscurae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - obscurae
Not approved	NOC99014	X. campestris oryzicola	Xanthomonas campestris oryzicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
	3000			Identified to Subspecies/Infrasubspecies - oryzicola
Not approved	NOC99014	X. campestris parthenii	Xanthomonas campestris parthenii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - parthenii
Not approved	NOC99014	X. campestris passiflorae	Xanthomonas campestris passiflorae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - passiflorae
Not approved	NOC99014	X. campestris paulliniae	Xanthomonas campestris paulliniae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - paulliniae
Not approved	NOC99014	X. campestris phormiicola	Xanthomonas campestris phormiicola	Landcare Research
Not approved	NOC99014	X. campestris phyllanthi	Xanthomonas campestris phyllanthi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - phyllanthi
Not approved	NOC99014	X. campestris physalidis	Xanthomonas campestris physalidis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - physalidis
Not approved	NOC99014	X. campestris plantaginis	Xanthomonas campestris plantaginis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - plantaginis
Not approved	NOC99014	X. campestris rhynchosiae	Xanthomonas campestris rhynchosiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - rhynchosiae
Not approved	NOC99014	X. campestris secalis	Xanthomonas campestris secalis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - secalis
Not approved	NOC99014	X. campestris sesbaniae	Xanthomonas campestris sesbaniae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - sesbaniae
Not approved	NOC99014	X. campestris tamarindi	Xanthomonas campestris tamarindi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - tamarindi
Not approved	NOC99014	X. campestris taraxaci	Xanthomonas campestris taraxaci	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - taraxaci
Not approved	NOC99014	X. campestris thespesiae	Xanthomonas campestris thespesiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - thespesiae
Not approved	NOC99014	X. campestris translucens	Xanthomonas campestris translucens	Landcare Research

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				Identified to Subspecies/Infrasubspecies - translucens
Not approved	NOC99014	X. campestris undulosa	Xanthomonas campestris undulosa	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - undulosa
Not approved	NOC99014	X. campestris vaculorum	Xanthomonas campestris vaculorum	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vaculorum
Not approved	NOC99014	X. campestris vernoniae	Xanthomonas campestris vernoniae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vernoniae
Not approved	NOC99014	X. campestris vignicola	Xanthomonas campestris vignicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vignicola
Not approved	NOC99014	X. campestris vitistrifoliae	Xanthomonas campestris vitistrifoliae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - vitistrifoliae
Not approved	NOC99014	X. campestris zingibericola	Xanthomonas campestris zingibericola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - zingibericola
Not approved	NOC99014	Xanth. campestris badrii	Xanthomonas campestris badii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - badii
Not approved	NOC99014	Xanth. campestris betae	Xanthomonas campestris betae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - betae
Not approved	NOC99014	Xanth. campestris cajani	Xanthomonas campestris cajani	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cajani
Not approved	NOC99014	Xanth. campestris cannae	Xanthomonas campestris cannae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cannae
Not approved	NOC99014	Xanth. campestris carotae	Xanthomonas campestris carotae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - carotae
Not approved	NOC99014	Xanth. campestris cassiae	Xanthomonas campestris cassiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - cassiae
Not approved	NOC99014	Xanth. campestris citri	Xanthomonas campestris citri	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - citri
Not approved	NOC99014	Xanth. campestris fici	Xanthomonas campestris fici	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
5500	55.00			Identified to Subspecies/Infrasubspecies - fici
Not approved	NOC99014	Xanth. campestris khayae	Xanthomonas campestris khayae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - khayae
Not approved	NOC99014	Xanth. campestris leeana	Xanthomonas campestris leeana	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - Ieeana
Not approved	NOC99014	Xanth. campestris leesiae	Xanthomonas campestris leesiae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - leesiae
Not approved	NOC99014	Xanth. campestris mallotii	Xanthomonas campestris mallotii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - mallotii
Not approved	NOC99014	Xanth. campestris mori	Xanthomonas campestris mori	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - mori
Not approved	NOC99014	Xanth. campestris olitorii	Xanthomonas campestris olitorii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - olitorii
Not approved	NOC99014	Xanth. campestris oryzae	Xanthomonas campestris oryzae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - oryzae
Not approved	NOC99014	Xanth. campestris patelii	Xanthomonas campestris patelii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - patelii
Not approved	NOC99014	Xanth. campestris pedalii	Xanthomonas campestris pedalii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - pedalii
Not approved	NOC99014	Xanth. campestris phlei	Xanthomonas campestris phlei	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - phlei
Not approved	NOC99014	Xanth. campestris pisi	Xanthomonas campestris pisi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - pisi
Not approved	NOC99014	Xanth. campestris poae	Xanthomonas campestris poae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - poae
Not approved	NOC99014	Xanth. campestris punicae	Xanthomonas campestris punicae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - punicae
Not approved	NOC99014	Xanth. campestris raphani	Xanthomonas campestris raphani	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2

Approval Code	Application Code	Common Name	Taxonomic Name	Organism Description
				Identified to Subspecies/Infrasubspecies - raphani
Not approved	NOC99014	Xanth. campestris ricini	Xanthomonas campestris ricini	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - ricini
Not approved	NOC99014	Xanth. campestris sesami	Xanthomonas campestris sesami	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - sesami
Not approved	NOC99014	Xanth. campestris syngonii	Xanthomonas campestris syngonii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - syngonii
Not approved	NOC99014	Xanth. campestris theicola	Xanthomonas campestris theicola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - theicola
Not approved	NOC99014	Xanth. campestris tribuli	Xanthomonas campestris tribuli	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - tribuli
Not approved	NOC99014	Xanth. campestris uppalii	Xanthomonas campestris uppalii	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - uppalii
Not approved	NOC99014	Xanth. campestris viegasil	Xanthomonas campestris viegasil	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - viegasil
Not approved	NOC99014	Xanth. campestris viticola	Xanthomonas campestris viticola	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2 Identified to Subspecies/Infrasubspecies - viticola
Not approved	NOC99014	Xanthomonas albilineans	Xanthomonas albilineans	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Xanthomonas axonopodis	Xanthomonas axonopodis	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Xanthomonas bromi	Xanthomonas bromi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Xanthomonas fragariae	Xanthomonas fragariae	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Xanthomonas populi	Xanthomonas populi	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Xylella fastidiosa	Xylella fastidiosa	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2
Not approved	NOC99014	Xylophilus ampelinus	Xylophilus ampelinus	Landcare Research International Collection of Micro-organisms from Plants - Plant pathogenic Bacteria and Fungi Risk Group: 2