



DECISION

Amended under section 67A of the HSNO Act on 19 August 2014

Date	31 January 2013
Application code	APP201362
Application type	To release any new organism under section 34 of the Hazardous Substances and New Organisms Act 1996
Applicant	Auckland Council
Date application received	10 September 2012
Hearing and consideration	19 December 2012
Considered by	A decision-making committee of the Environmental Protection Authority (the Committee) ¹ ; <ul style="list-style-type: none">• Damian Stone (Chair)• Dr Kerry Laing• Dr Shaun Ogilvie
Purpose of the application	To import and release the pathogen <i>Kordyana</i> sp. as a biological control agent for the weed <i>Tradescantia fluminensis</i>
The new organism approved for release	<i>Kordyana</i> sp. ²

1. Summary of decision

- 1.1. The application to release *Kordyana* sp. was lodged under section 34 of the Hazardous Substances and New Organisms Act 1996 (the Act).
- 1.2. The application was considered in accordance with the relevant provisions of the Act and of the HSNO (Methodology) Order 1998 (the Methodology).
- 1.3. The Committee has **approved** the application **without controls** in accordance with section 38(1)(a) of the Act.

¹ The Committee referred to in this decision is the subcommittee that has made the decision on this application under delegated authority in accordance with section 18A of the Act.

² Minas Gerais, Viçosa, 10 December 2009, D. M. Macedo (VIC 31367) – HOLOTYPE: lodged with the herbarium at the Universidade Federal de Viçosa (Herbarium VIC)

2. Application process

Application Receipt

2.1. The application was formally received for processing on 10 September 2012.

Public notification

2.2. Section 53(1)(c) of the Act provides that an application under section 34 of the Act must be publicly notified by the Environmental Protection Authority (EPA).

2.3. The application was notified by placing a notice on the EPA website on 19 September 2012.

2.4. In accordance with section 53(4) of the Act, letters or emails notifying the Minister for the Environment, the Ministry for Primary Industries (MPI), the Department of Conservation (DOC), and other government departments, crown entities, and local authorities who have expressed an interest in being notified about applications for non-genetically modified new organisms were sent. Māori organisations, non-government organisations and stakeholders who have expressed an interest in being notified about applications for non-genetically modified new organisms were directly notified. All those parties had an opportunity to comment on the application as per section 58(1)(c) of the Act and clause 5 of the Methodology.

2.5. Section 59(1)(c) of the Act requires an application to be open for the receipt of submissions for 30 working days from the date of public notification. The application was open for submissions from 12 September 2012 until 25 October 2012.

2.6. Eleven submissions were received. The Bay of Plenty Regional Council, West Coast Regional Council, Hamilton City Council, Northland Regional Council, DOC, the New Zealand Biosecurity Institute, and Te Rūnanga o Ngāi Tahu made submissions in support of the application. The New Zealand Biosecurity Institute requested to speak at the hearing.

2.7. The Nursery and Garden Industry Association (NGIA), Federated Farmers, Margaret Hicks, and Cliff Mason made submissions in opposition to the application, and all requested to speak at the hearing.

2.8. After reviewing the EPA staff report, Federated Farmers withdrew their submission as it was considered that the staff report had adequately addressed their concerns. NGIA also informed the EPA that *“in light of the EPA staff report and...[Landcare Research’s]... response to submissions, NGIA has determined that we do not wish to speak to our submission at the public hearing. We are satisfied with Landcare Research’s reassurances regarding the issues we were concerned about”*. Cliff Mason also withdrew his request to speak at the hearing as he was unable to attend either in person or via teleconference on the day set for the hearing. However, he did not withdraw his submission in opposition to the application.



Comments from MPI and DOC

- 2.9. The Ministry of Primary Industries (MPI) chose not to comment on the application.
- 2.10. The Department of Conservation (DOC) considers *Tradescantia fluminensis* to be a significant environmental weed and that successful control will help protect New Zealand's conservation values. DOC wrote a submission in support of this application.

Reports sought

- 2.11. The EPA staff report was provided under section 58(1)(a) of the Act.
- 2.12. Ngā Kaihautū Tikanga Taiao (NKTT), were given the opportunity to prepare a report and chose not to comment on the application.
- 2.13. On 23 November 2012, the EPA staff report was published on the EPA website and the applicant and submitters were informed of its availability.

Hearing and Consideration

- 2.14. Section 59(1)(d) of the Act requires that the hearing commence not more than 30 working days after the closing date for submissions. The hearing was originally scheduled for 6 December 2012 in Wellington but due to the unforeseen illness of a Committee member, the hearing was postponed until 19 December 2012. As this revised hearing date is outside the 30 working day period, the 59(1)(d) time requirement was waived under section 59(5).
- 2.15. In addition, sections 59(1)(e) and (f) require applicants and submitters to be given at least 10 working days notice of the commencement date and time and place of the hearing. Due to the last minute rescheduling of the hearing only nine working days notice was given. Therefore the section 59(1)(e) and (f) time requirements were waived under section 59(5).
- 2.16. Dr Nick Waipara (in person) and Jack Crow (by phone) from Auckland Council, presented the application and introduced a panel of expert witnesses:
- Dr Richard Hill, Application Author, (Richard Hill & Associates subcontracted to Landcare Research) (in person);
 - Dr Simon Fowler, Landcare Research Team Leader (in person); and
 - Ms Lynley Hayes, Landcare Research Team Leader (by phone).
- 2.17. Submitters Margaret Hicks (by phone) and Sara Moylon on behalf of the New Zealand Biosecurity Institute (in person) presented their submissions. Specific points raised by submitters (either in their submission or during the hearing) are addressed where appropriate throughout this decision.
- 2.18. The Committee would like to thank all people who submitted the information used in making this decision. Public submissions provide a focus for the Committee on points that need clarification, and



the Committee found the submissions and the applicants' responses very helpful in its consideration of the application.

Information available for the consideration

2.19. The information available for the consideration comprised:

- The application;
- Internal EPA staff report;
- Comments received from DOC;
- Submissions; and
- Information obtained during the hearing.

Legislative criteria for application

2.20. The application was determined in accordance with section 38 of the Act, taking into account the matters specified in sections 36 and 37, relevant matters in Part 2 of the Act, and the Methodology.

3. Minimum Standards

3.1. The Committee noted that the biology of *Kordyana* sp. is described in the application and the EPA staff report. The Committee also noted that while *Kordyana* sp. has not been officially described in taxonomic literature, the applicant is very clear about which species is intended for release.

3.2. The Committee considered whether *Kordyana* sp. meets the five minimum standards as specified in section 36(a-e) of the Act, specifically whether it could:

- (a) cause any significant displacement of any native species within its natural habitat; or
- (b) cause any significant deterioration of natural habitats; or
- (c) cause any significant adverse effects on human health and safety; or
- (d) cause any significant adverse effects to New Zealand's inherent genetic diversity; or
- (e) cause disease, be parasitic, or become a vector for human, animal, or plant disease, unless the purpose to import or release an organism to cause disease, be a parasite, or a vector for disease.

Consideration of section 36(a) of the Act

3.3. The Committee considered whether *Kordyana* sp. is likely to cause any significant displacement of any native species within its natural habitat.

3.4. The Committee reviewed the results of laboratory testing intended to determine whether there is any risk to native species from *Kordyana* sp. that could cause displacement of those species.

3.5. The Committee considered whether the testing was sufficient to confirm that desirable plants would not be adversely affected by *Kordyana* sp. The applicant noted that there are no close relatives of



Tradescantia fluminensis in New Zealand and that as there are limited species outside the *Tradescantia* genus, some plant species outside the family Commelinaceae were tested.

- 3.6. The applicant stated that when choosing the plants to be tested they consulted with DOC. The Committee noted that DOC stated that “*it has no reason to dispute the results of the host range testing and it is our opinion that the yellow leaf spot fungus (Kordyana sp.) poses a negligible risk to the native flora and fauna of New Zealand.*”
- 3.7. Margaret Hicks was concerned that “*you don’t know what you don’t know*” and that cumulative effects may occur. The applicant and expert witnesses explained that 80 years of weed biological control have shown major benefits and no adverse effects. It was noted that there have been more accidental releases and incursions of new organisms in to New Zealand than deliberate releases of organisms in New Zealand.
- 3.8. The Committee noted that the host range testing results were peer-reviewed by an expert (Dr Stanley Bellgard of Landcare Research, Auckland) and is satisfied with the validity of the host range testing regime and that no native flora will be significantly displaced by the introduction of *Kordyana* sp.
- 3.9. Margaret Hicks expressed concerns that if there is an increase in atmospheric temperature in the future, this may impact on the efficacy and distribution of the *Kordyana* sp. and the other agents that have been approved for release to control *Tradescantia fluminensis*. The applicant and expert witnesses explained that even if the temperature in New Zealand increases by 1-2°C, this is within the Brazilian host range of *tradescantia* and the agents are still expected to work synergistically in a wide range of habitats. If the temperature should increase significantly more than that, the Committee considers that all agents may be adversely affected and may in fact die out. However, section 5(b) of the Act states that “*all persons exercising functions, powers, and duties.....to achieve the purpose of this Act ...recognise and providefor the reasonably foreseeable needs of future generations*”, and the Committee considers that temperature increases beyond one or two degrees may occur beyond the reasonably foreseeable future.
- 3.10. There are no fungi in the same family as *Kordyana* sp. (Family Brachybasidiaceae) known in New Zealand. The closest relatives of *Kordyana* sp. that do occur in New Zealand are seven species (two exotic, five indigenous) of *Exobasidium* (Family Exobasidiaceae), which are in the same order as *Kordyana* sp. (Exobasidiales). None of these fungi are found on *Tradescantia* species or on any close relatives. The Committee is therefore satisfied that no native fungi will be displaced through the release of *Kordyana* sp.
- 3.11. After assessing all the information, the Committee is satisfied that *Kordyana* sp. is not likely to cause any significant displacement of any native species within its natural habitat.



Consideration of section 36(b) of the Act

- 3.12. The Committee considered whether *Kordyana* sp. is likely to cause any significant deterioration of natural habitats.
- 3.13. As discussed above, the Committee reviewed the results of laboratory testing intended to determine whether there is any risk to non-target species. The Committee is satisfied with the validity of the host range testing regime and that no significant deterioration of natural habitats will result from the introduction of *Kordyana* sp.
- 3.14. After assessing all the information, the Committee is satisfied that *Kordyana* sp. is not likely to cause any significant deterioration of natural habitats.

Consideration of section 36(c) of the Act

- 3.15. The Committee considered whether *Kordyana* sp. is likely to cause any significant adverse effects on human health and safety.
- 3.16. The applicant, submitters and the EPA staff report did not identify any effects on human health and safety. After assessing all the information, the Committee did not identify any mechanisms by which this could happen, and is satisfied that *Kordyana* sp. is not likely to cause any significant adverse effects on human health and safety.

Consideration of section 36(d) of the Act

- 3.17. The Committee considered whether *Kordyana* sp. is likely to cause any significant adverse effect to New Zealand's inherent genetic diversity.
- 3.18. The Committee noted that some submitters expressed general concerns about the release of new species in New Zealand. For example Cliff Mason stated in his written submission that "*the introduction of any alien organism to New Zealand causes significant damages to the biological integrity of the country.*"
- 3.19. The Committee is satisfied with the information on the taxonomy of *Kordyana* sp. provided in the EPA staff report. The Committee considered that there are no taxa closely related to *Kordyana* sp. (see 3.10 of this document). Since hybridisation only occurs between close relatives, the Committee considered that there is no possibility that *Kordyana* sp. would hybridise with a native fungus. The Committee noted that the evolutionary changes required for this to occur happen over hundreds and thousands of generations, even under positive selective pressure. This equates to hundreds, or even thousands of years, and cannot be considered as part of the HSNO risk assessment.
- 3.20. After assessing all the information, the Committee is satisfied that *Kordyana* sp. is not likely to cause any significant adverse effects on New Zealand's inherent genetic diversity.



Consideration of section 36(e) of the Act

- 3.21. The Committee considered whether *Kordyana* sp. is likely to cause disease, be parasitic, or become a vector for human, animal, or plant disease. The Committee considered whether *Kordyana* sp. could act as an animal pathogen, or if *Kordyana* sp. could produce a toxin that could harm animals if infected plant tissue was eaten.
- 3.22. The applicant noted that *Kordyana* sp. is a plant pathogen and it is not known to cause disease in animals.
- 3.23. The applicant noted that as *Kordyana* sp. is a biotrophic pathogen (i.e. colonises living plant tissue and obtains nutrients from living cells) rather than a necrotrophic pathogen (i.e. kills plant tissue and obtains nutrients from dead cells), it is unlikely to produce toxins during its infection of *Tradescantia fluminensis*. The applicant noted that *Kordyana* sp. has not been observed to cause disease in animals Brazil.
- 3.24. Therefore the Committee is satisfied that *Kordyana* sp. is not likely to cause disease, be parasitic, or become a vector for human, animal, or plant disease, except where it is intended to cause plant disease.

Conclusion on the Minimum Standards

- 3.25. The Committee is satisfied that *Kordyana* sp. is unlikely to cause significant displacement of other organisms, cause significant deterioration of natural habitats, have any significant adverse effects on human health and safety, have any significant adverse effects on New Zealand's inherent genetic diversity and is unlikely to cause disease, be parasitic, or become a vector for human, animal, or plant disease.
- 3.26. After assessing all the information, the Committee considers that *Kordyana* sp. meets the minimum standards, as specified in section 38(a)(i) of the Act.

4. The ability to establish an undesirable self-sustaining population and the ease of eradication

- 4.1. Section 37 of the Act requires the Committee to have regard to the ability of the organism to establish an undesirable self-sustaining population and the ease with which the organism could be eradicated if it established such a population.
- 4.2. The applicant noted that as *Kordyana* sp. is a biotroph (i.e. it is obligate on the host plant), infected plant material will initially be placed within areas infested with tradescantia. From there, the *Kordyana* sp. spores will be spread by wind to other tradescantia plants.



- 4.3. The Committee considers that *Kordyana* sp. would establish self-sustaining populations and that such populations would not be undesirable, as that it is the intention of the release.
- 4.4. The Committee noted that the eradication of such a population would be very difficult, but that this is unlikely to be an objective.

5. Effects of any inseparable organism

- 5.1. No inseparable organisms associated with *Kordyana* sp. were identified. To confirm that only the approved *Kordyana* sp. will be released, the applicant stated that the *Kordyana* sp. imported from Brazil will be held at the plant pathogen facility until it is confirmed (e.g. by DNA sequencing) that a pure culture of the *Kordyana* sp. that is the subject of this approval has been imported.

6. Assessment of adverse effects

- 6.1. The Committee considered the potential adverse effects of the organism, including any risks and costs associated with the release of the organism, on human health and safety, the environment, society and communities, Māori culture and traditions, the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and the market economy.
- 6.2. After assessing all the information, the Committee did not identify any significant adverse effects on human health and safety, or on the market economy from the release of *Kordyana* sp.
- 6.3. The Committee considered whether *Kordyana* sp. could pose any environmental effects in addition to those covered under the minimum standards. After assessing all the information, the Committee did not identify any adverse effects on the environment from the release of *Kordyana* sp.
- 6.4. After assessing all the information, the Committee did not identify any adverse effects on society and communities from the release of *Kordyana* sp.

Effects on Māori and their culture and traditions and the principles of the Treaty of Waitangi (Te Tiriti o Waitangi)

- 6.5. The Committee took into account the possible effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, valued flora and fauna, and other taonga, and the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).
- 6.6. The Committee noted that Te Rūnanga o Ngāi Tahu supports this application. Te Rūnanga o Ngāi Tahu stated that it “*has reservations about the introduction of exotic species into Aotearoa New Zealand. In this instance, however, we believe the benefits to the native environment outweigh the risks associated with the import and release of Kordyana as part of an integrated bio control*”



programme for Tradescantia” and “As we did with the earlier application, we support the application to import and release Kordyana sp. as a component of an integrated bio control programme for the weed.”

- 6.7. After assessing all the information, the Committee did not identify any adverse effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, valued flora and fauna, and other taonga, as there will be no impacts on native flora or fauna.
- 6.8. The Committee notes that Landcare Research provides information on the future of biocontrol research in New Zealand in their quarterly report “*Biological Control of Weeds*”, which is available through the Landcare website.
- 6.9. Given the absence of identified effects to the outcomes of significance to iwi/Māori (as outlined in the Protocol ‘*Incorporating Māori perspectives in HSNO Act decision making*’) the Committee considers the application to be broadly consistent with the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

Conclusion

- 6.10. After considering the information, the Committee did not identify any adverse effects, risks or costs from the release of *Kordyana* sp. The Committee therefore considers the risks to be negligible. Since the Committee did not identify any adverse effects, the Committee was not required to take into account the probability of occurrence or magnitude of any adverse effects.
- 6.11. In addition, the Committee noted that New Zealand has no international obligations relevant to the application.

7. Assessment of positive effects

- 7.1. The Committee considered the potential positive effects (including benefits) of the organism on human health and safety, the environment, society and community, relevant aspects of Māori culture and traditions, and the market economy.
- 7.2. The Committee noted the benefits outlined in the EPA staff report and considered that there may be additional benefits, as outlined below.
- 7.3. The applicant and expert witnesses noted that tradescantia is a significant weed in many New Zealand regions. Tradescantia can readily infest a wide range of habitats including shaded regions to form thick weed mats which can prevent forest regeneration and consequently reduce biodiversity.
- 7.4. The applicant and expert witnesses noted previous research that showed that the total elimination of tradescantia is not required to gain ecological benefits. The applicant and expert witnesses noted that



a reduction in dry biomass of tradescantia to less than 200g/sq metre (an 80% reduction in current infestation biomass in some habitats) would allow other plants to co-exist, thus permitting forest regeneration (Standish 2001³). The applicant and expert witnesses noted that the total eradication of tradescantia is probably not feasible but a decrease in tradescantia biomass could restrict the range of tradescantia and may eliminate it from some habitats.

- 7.5. It was also noted that tradescantia can cause allergic dermatitis in dogs and there is anecdotal evidence of allergic reactions in humans. The Committee considers that restricting the range of tradescantia will reduce the occurrence of allergic reactions in dogs and possibly other animals.
- 7.6. The control of tradescantia was discussed by the applicant, expert witnesses and submitters. The applicant and expert witnesses noted that there are currently three biocontrol agents (beetles) approved to act against tradescantia in New Zealand. *Kordyana* sp. is expected to complement these, and is not expected to adversely impact any existing agents. The applicant noted that in Brazil the *Kordyana* sp. is commonly found in wet environments/flood prone areas. As beetles are typically found in lower numbers in such regions, *Kordyana* sp. may have a greater impact against tradescantia in this type of environment.
- 7.7. Cliff Mason considers that there “*is no evidence providing a theoretical foundation for the assumed synergistic effects of a combination of BCAs*”⁴. “*There does not appear to be any data in the literature to support the assumption, implicit in this application, that there is a synergistic effect between BCAs. This assumption suggests that the role of the BCAs in their native environment is directed toward control of the target that is now a weed in New Zealand.....There is no reason to even suspect synergy against the target and not to suspect interference of the BCAs with each other*”.
- 7.8. The Committee noted numerous examples of multiple biocontrol agents working synergistically to control a given weed. For example, agents that attack flowers/flower buds have been used overseas in tandem with seed feeders to successfully control *Sesbania* (Hoffmann and Moran 1998⁵); *Hakea* (Le Maitre et al. 2008⁶); and *Acacia longifolia* (Impson et al. 2004⁷). The Committee considered that as the adverse effects are negligible in this case, that even if the organism fails to work synergistically with the other agents or even if one emerges as the one that actually controls tradescantia, then no harm will have been done to New Zealand’s native flora or fauna. If one of the organisms released for

³ Standish RJ (2001). The ecological impact and control of an invasive weed *Tradescantia fluminensis* in lowland forest remnants: a thesis submitted for the degree of Doctor of Philosophy at the Institute of Natural Resources (Ecology), Massey University, Palmerston North, New Zealand.

⁴ Biological control agents (BCAs)

⁵ Hoffmann JH & Moran VC (1998). The population dynamics of an introduced tree, *Sesbania punicea*, in South Africa, in response to long-term damage caused by different combinations of three species of biological control agents. *Oecologia* 114: 343-348

⁶ Le Maitre DC, Krug MR, Hoffmann JH, Gordon AJ, and TN. Mgidi (2008). *Hakea sericea*: Development of a model of the impacts of biological control on population dynamics and rates of spread of an invasive species. *Ecological Modelling* 212 (3-4): 342-358

⁷ Impson FAC., Moran VC. And JH Hoffmann (2004). Biological control of an alien tree, *Acacia cyclops*, in South Africa: impact and dispersal of a seed-feeding weevil, *Melanterius servulus*. *Biological Control* 29: 375-381



control of tradescantia is successful, either on its own or in conjunction with other agents, then tradescantia will decline in the environment, reducing the food source for all the agents, and thus reducing their populations.

- 7.9. Margaret Hicks queried why Landcare do not wait until the beetles were proven to be efficient before releasing *Kordyana* sp. The applicant and expert witnesses replied that this was not feasible as it would extend the timeframe and costs for the programme, so that the programme became untenable.
- 7.10. Hamilton City Council and Sara Moylon stated that manual control methods for tradescantia is labour-intensive and expensive. For example Sara Moylon stated that it can cost approximately \$1,000/hectare for a single herbicide treatment. This needs to be performed three times in a season and then repeated for at least two years.
- 7.11. It was also noted by submitters that herbicides are not appropriate to use in all circumstances, for example in restoration settings where native plants may suffer from adverse non-target effects or areas with difficult accessibility.
- 7.12. Sara Moylon considered that the benefits of the use of BCAs to control tradescantia include the reallocation of resources currently used to control tradescantia to other programmes, and a reduction in herbicide use with subsequent reduced toxicity to the environment, workers and the public.
- 7.13. Some submitters welcomed the use of biocontrol to control tradescantia. For example, the West Coast Regional Council welcomed “*all viable methods of biocontrol for this pest plant*”. Northland Regional Council stated that “*biocontrol is considered a sustainable long-term control option*” while the New Zealand Biosecurity Institute stated that “*This application for the introduction of a biocontrol agent will allow access to a sustainable, effective, cost-effective and safe control tool that is fundamental for the effective and efficient control of tradescantia.*” The Bay of Plenty Regional Council stated that “*Biological control is the only hope of sustained and widespread management of the adverse effects caused by Tradescantia because agents persist from year to year, and can disperse to colonise unidentified sites of tradescantia populations*”.
- 7.14. However, Margaret Hicks expressed concern with the overuse of BCAs in Northland. She considers that a change in human behaviour will be required to improve land management as she considers that human activities (such as not fencing cattle in, and clearing forest areas) can spread tradescantia, and lead to degradation of native ecosystems.
- 7.15. While the Committee recognised that there may be environments where tradescantia provides an ecosystem service, i.e. habitat for whitebait species to lay eggs, the Committee considers that this service can be provided by other plants and the removal of tradescantia will allow the restoration of



such natural ecosystems. The Committee considered that this is likely to be beneficial to the environment of New Zealand.

Conclusion

7.16. After considering the information, the Committee considered that there are benefits to be gained from the release *Kordyana* sp. The Committee is satisfied that these benefits will be achieved in the foreseeable future and will be non-negligible.

8. Achieving the purpose of the Act

- 8.1. The purpose of the Act is to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms (section 4 of the Act).
- 8.2. The Committee took into account the following matters when considering the application in order to achieve the purpose of the Act:
- The sustainability of all native and valued introduced flora and fauna;
 - The intrinsic value of ecosystems;
 - Public health;
 - The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, valued flora and fauna, and other taonga;
 - The economic and related benefits and costs of using a particular hazardous substance or new organism;
 - New Zealand's international obligations;
 - The need for caution in managing adverse effects where there is scientific and technical uncertainty about those effects; and
 - The principles of the Treaty of Waitangi (Te Tiriti o Waitangi).
- 8.3. The Committee is satisfied that this decision is consistent with the purpose of the Act and the above principles and matters. Any substantive issues arising from the legislative criteria and issues raised by submitters have been discussed in the preceding sections of this decision.

9. Evaluation and weighing of positive and adverse effects

- 9.1. The Committee took into account all the effects of *Kordyana* sp., and concluded that they pose negligible risks, and that the benefits are non-negligible. It is therefore evident that the positive effects of releasing *Kordyana* sp. outweigh the adverse effects.



10. Recommendation

10.1. The Committee noted that Landcare Research undertakes ongoing monitoring of the post release effects of biocontrol agents. They:

- Look for establishment;
- Look for damage to non-target plants; and
- Follow-up in the “body of knowledge” i.e. publish the results of release and post release monitoring.

10.2. The Committee supports this degree of post release monitoring and recommends that Landcare Research continue to supply the EPA staff and the public with this information via newsletters and publications.

11. Decision

11.1. After reviewing all of the information contained in the application, the Committee is satisfied that the application met the requirements of section 34 of the Act. In any event, in accordance with section 59(3)(a)(ii), the Committee waives any information requirement that has not been met as requested by the applicant in its application.

11.2. The Committee considered that the threshold for approval under section 38 of the Act had been met. The Committee has concluded that the organisms meet the minimum standards set out in section 36 of the Act and that the positive effects of the organisms outweigh the adverse effects of the organisms, taking into account all of the following:

- All the effects of the organisms;
- The matters in section 37 of the Act;
- The relevant matters in Part 2 of the Act; and
- The Methodology.

11.3. The Committee decided to exercise its discretion and **approve** the release of *Kordyana* sp. under section 38(1)(a) of the Act. The Committee noted that in accordance with section 38(2) of the Act, the approval has been granted without controls.

11.4. The Committee noted that under section 38(3) of the Act, if *Kordyana* sp. has not been released within five years of the date of this decision, this approval for release will lapse. However, any person may apply before the expiry of the time limit for an extension of that time limit for a further period of up to five years.

11.5. The Committee has waived the requirement under section 38(4) of the Act, to notify the Committee of the release of *Kordyana* sp.



11.6. The Committee strongly supports ongoing communication between iwi, regional councils, industry bodies and other community groups associated with biocontrol programmes.

11.7. The Committee would like to thank all people who provided information that has been used in making this decision.

Signed

30 January 2013

Damian Stone
Chair, Decision Making Committee
Environmental Protection Authority

Date

Amendment August 2014

- To assign the correct approval number to the new organism approved for release



Environmental
Protection Authority
Te Mana Rauhi Taiao

19 August 2014

Louise Malone
Chair, Decision Making Committee
Environmental Protection Authority

Date

Approval numbers for the organisms in application APP201362

Organism	Approval code
<i>Kordyana</i> sp.	NOR100082

