

# Form: Call for expression of interest to prescribe certain organisms as ‘not new’ organisms

for the purposes of the Hazardous Substances and New Organisms (HSNO) Act

## Introduction

Fill this form if you or your organisation seeks to make a proposal to prescribe certain new organisms as ‘not new’ organisms.

Species are classed as new organisms under the Hazardous Substances and New Organisms (HSNO) Act if they were not present in New Zealand before 29 July 1998. As such, you require HSNO Act approval for propagation or distribution of the organism.

To change its ‘new’ organism status (which means that an organism will no longer be regulated as ‘new’ under the HSNO Act), an organism must be deregulated under section 140(1)(c) of the HSNO Act, by an Order in Council given by the Governor General prescribing organisms that are not new organisms for the purposes of this Act.

The Environmental Protection Authority will use the information in this form in the decision-making process (which is likely to include a public consultation component). Clearly label and include any confidential information as a separate appendix.

Proposing a candidate new organism does not guarantee the status of the organism will be changed. Organisms will be assessed on a case-by-case basis. We may advise you to apply using another pathway if there’s an appropriate one available.

## Submission details

Once you have completed this form, you may:

- send by post to: Environmental Protection Authority, Private Bag 63002, Wellington 6140
- or email to: [submissions@epa.govt.nz](mailto:submissions@epa.govt.nz)

**Submissions open on the 22 March and close on 4 June at 5.00 pm.**

## Privacy Act

We are collecting your personal information in your submission relating to prescribing an organism as ‘not new’, and will use the information you provide in this form to contact you in relation to your submission. We may also use your contact details for the purpose of requesting your participation in customer surveys. We will store your personal information securely. Your information may be made public unless you select the box below to request that we keep it confidential. You have the right to access the personal information we hold about you and to ask for it to be corrected if it is wrong. If you would like to access your personal information, or have it corrected, please contact us.

**Please keep my personal information confidential.**

# Part 1

**Name of person or organisation making the proposal:** Ministry for Primary Industries

**Postal address:** 25 The Terrace, Wellington 6011, New Zealand

**Date:** 5/05/2021

# Part 2

## Details of the new organism(s) proposed to be prescribed as 'not new' organism(s)

Please complete this section for each organism proposed to be prescribed as a not new organism.

### 1. Name of the organism

*Paenibacillus alvei*

### 2. Why do you want to prescribe this organism as 'not new'?

Including:

- a. Is there any information on the economic or environmental impacts of the organism?
- b. What is the benefit of making this organism 'not new'?
- c. Can these benefits be quantified?
- d. Can these benefits be achieved by alternative means?

In 2006, the Ministry for Agriculture and Forestry (now the Ministry for Primary Industries) applied to the Environmental Risk Management Authority (ERMA; now the Environmental Protection Authority) for a new organism determination under the Hazardous Substances and New Organisms Act (HSNO) for *P. alvei* due to the association of *P. alvei* with bees and bee products and the possibility the organism may be present in imported honey and honey products. In 2007, ERMA determined *P. alvei* to be a new organism to New Zealand (Anon, 2007).

Following the detection of *P. alvei* in three separate locations in NZ, MPI considers that *P. alvei* is established in NZ and is of no biosecurity relevance in considering possible imports of bee products (Spence et al. 2013).

Whilst *P. alvei* remains determined to be a new organism, the requirements of the HSNO Act create significant uncertainty around the development of a new import health standard for bee products. Given the ubiquitous distribution of this organism in New Zealand, any sanitary measures on imports that target this organism to satisfy HSNO Act requirements will be viewed by trading partners as an unjustifiable barrier to trade. There is no evidence that more pathogenic strains of *P. alvei* exist overseas. Therefore, to remove the uncertainty over the need to manage this organism, its new organism status should be removed as it is

widespread in New Zealand and not subject to and control or eradication effort in New Zealand.

### 3. Describe the biology of the organism

Including:

- a. What are the biological characteristics of the organism?
- b. Where is it found overseas?
- c. Does it cause a disease?
- d. Does it have potentially beneficial characteristics?
- e. What adverse effects could making this organism 'not new' have on people or the environment, if any? Can these be quantified?

*P. alvei*, formerly known as *Bacillus alvei*, is a facultative spore forming Gram positive bacterium. It is a ubiquitous environmental saprophyte that has been isolated from a variety of sources, including cheese, fermented tomatoes, healthy beehives, honey bee guts, honey and soil. In relation to bees, *P. alvei* is a secondary invader bacteria after American foulbrood. *P. alvei* does not normally cause disease (Anon, 2007; MAF, 2004) but is infrequently recognised as a human pathogen (Fergusson et al, 2019).

### 4. Has the organism formed a self-sustaining population in New Zealand?

Including:

- a. Where and when has the population(s) of the organism been found in New Zealand?
- b. How does this organism spread?

In 2008, *P. alvei* was isolated in NZ from a dead bumble bee near Ohope, Bay of Plenty. Surveillance for *P. alvei* was undertaken in 2010, which involved collecting 510 samples of honey, hive floor detritus and soil from geographically diverse apiaries in the North and South Islands of NZ. *P. alvei* was isolated from soil samples collected at the base of beehives in Whanganui and Auckland. Confirmation of *P. alvei* was based on macroscopic appearance, microscopic appearance, biochemical test results and DNA sequencing (Spence et al. 2013).

No further targeted surveillance has been undertaken for *P. alvei*.

*P. alvei* spores can contaminate the environment.

### 5. Is any person attempting to manage, control or eradicate the organism under any Act or is the organism the subject of an enforcement action or action under a civil penalty regime?

Including:

- a. If the organism has been part of an official incursion response or other MPI response or management activity, describe what happened here including why the response was stood down.

There are no attempts to manage, control or eradicate *P. alvei* in NZ.

**6. Is there reason to believe that this organism was deliberately imported in contravention of an Act of Parliament? If so, please explain.**

There is no reason to believe this organism was deliberately imported. MPI submitted evidence in ERMA Application for New Organism Determination under Section 20 of the HSNO Act that *P. alvei* was present in NZ prior to 29 July 1998 (Anon, 2007). ERMA stated 'there is no reason to doubt this expert opinion and given the ubiquitous nature of these microorganisms; the conduciveness of the New Zealand environment to the survival of *P. alvei* and that no one has tried to eradicate this organism it is probable that *P. alvei*, was and still is, present in New Zealand'. ERMA was of the view that there was insufficient evidence to make a determination, and by default *P. alvei* would be considered a new organism.

**7. Is there any other information you wish to include?**

Targeted surveillance was undertaken for *P. alvei* in 2010. The report demonstrating the presence of *P. alvei* in NZ can be found here:

R. P. Spence , P. Demchick , M. Hornitzky , H. Pharo , L. Peacock , A. McFadden & M. Stone (2013) Surveillance of New Zealand apiaries for *Paenibacillus alvei*, *New Zealand Entomologist*, 36:2, 82-86, DOI: 10.1080/00779962.2012.759085

## Part 3

**8. Provide references to the information you provided (if applicable)**

Anon (2007) ERMA New Zealand Evaluation and Review Report: To determine whether *Paenibacillus alvei* is a new organism (Application Number: S2606009)

Ministry of Agriculture and Forestry (2004) Import Risk Analysis: Honey bee products, 80-82: <https://www.mpi.govt.nz/dmsdocument/2789-Honey-bee-products-Import-risk-analysisDecember-2004>

R. P. Spence , P. Demchick , M. Hornitzky , H. Pharo , L. Peacock , A. McFadden & M. Stone (2013) Surveillance of New Zealand apiaries for *Paenibacillus alvei*, *New Zealand Entomologist*, 36:2, 82-86, DOI: 10.1080/00779962.2012.759085

J. Fergusson et al (2019). *Paenibacillus alvei* multifocal cavitary lung abscesses in an immunocompetent man. *Inf. Dis. Clin. Prac.* 27(2): 73-76