

Cannabis sativa

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Cannabis sativa*”.

Note: Importers of *Cannabis sativa* (low THC hemp seed) must contact the Ministry of Health prior to importation for advice on licensing for low THC hemp seed.

**Ministry of Health
P O Box 5013
Wellington
Attention: Advisor, Controlled Drug Licensing
Telephone: 04 496 2000**

Entry conditions for *Cannabis sativa* (low THC Hemp seed variety) seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of Cannabis sativa*

Refer to “Pest List for *Cannabis sativa*”.

(ii) *Approved exporting countries*

All countries

(iii) *Documentation*

Phytosanitary certificate: A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Cannabis sativa* seeds for sowing exported into New Zealand.

(iv) *Phytosanitary requirements*

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Cannabis sativa* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests and regulated weed species, including the regulated insects and mites on MAF’s “Pest List for *Cannabis sativa*”.

AND EITHER

- sourced from a “Pest free area” or “Pest free place of production”, free from the named regulated bacteria (*Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*).

OR

- treated with the hot water treatment as described in MAF’s “Approved Treatments for *Cannabis sativa*”;

AND EITHER

- sourced from a “Pest free area” free from the named regulated fungi (*Leptosphaeria woroninii*, *Septoria cannabis* and *Curvularia cymbopogonis*)
- OR
- treated with one of the fungicide combinations described in MAF’s “Approved Treatments for *Cannabis sativa*”;

AND

- sourced from a “Pest free area” or “Pest free place of production”, free from the named regulated viruses (*Hemp mosaic virus* and *Hemp streak virus*).

(v) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section (if applicable), and by providing the following additional declarations to the phytosanitary certificate:

"The *Cannabis sativa* seeds for sowing in this consignment have been:

- [if appropriate] sourced from a “Pest free area”, free from _____ (name of the regulated bacteria) _____, and/or a “Pest free place of production”, free from _____ (name of the regulated bacteria) _____.

AND

- [if appropriate] sourced from a “Pest free area”, free from _____ (name of the regulated fungi) _____;

AND

- sourced from a “Pest free area”, free from _____ (name of the regulated virus) _____, and/or a “Pest free place of production”, free from _____ (name of the regulated virus) _____.

Approved Testing and Treatments for *Cannabis sativa*

Hot water treatment (for bacteria and parasitic weed) prior to shipment

The *Cannabis sativa* seeds must be treated using a hot water dip for the eradication of bacterial organisms (*Pseudomonas syringae* pv. *cannabina* and *Xanthomonas campestris* pv. *cannabis*). Hot water treatment must be conducted either at 50°C for 30 minutes or at 60°C for 10 minutes (Hemp Diseases and Pests: Management and Biological Control. J. M. McPartland, R. C. Clarke and D. P. Watson 2000. CAB International).

Note: The hot water treatment that would be carried out in New Zealand as an alternative to the same treatment prior to shipment, cannot be permitted as no MAF-approved facility is currently available in New Zealand.

Fungicides

The *Cannabis sativa* seeds must be treated (in lieu of pest free area) with the active ingredients in one of the following treatments

- (i) Carboxin at 0.8g a.i. per kg seed and thiram at 1g a.i. per kg seed.
- (ii) Carboxin at 0.8g a.i. per kg seed and captan at 0.7g a.i. per kg seed.
- (iii) Imazalil at 80mg a.i. per kg seed and triadimenol at 220mg a.i. per kg seed.
- (iv) Imazalil at 80mg a.i. per kg seed and flutriafol at 80mg a.i. per kg seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Pest List for *Cannabis sativa* (Seed for Sowing)

Scientific name	Organism type	Common name	Quarantine status	Measures to prevent entry	Actions on interception
<i>Pseudomonas syringae</i> pv. <i>cannabina</i>	bacterium	-	Regulated	5 or 7 or 8	3
<i>Xanthomonas campestris</i> pv. <i>cannabis</i>	bacterium	-	Regulated	5 or 7 or 8	3
<i>Curvularia cymbopogonis</i>	fungus	-	Regulated	5 or 7	3
<i>Leptosphaeria woroninii</i>	fungus	-	Regulated	5 or 7	3
<i>Septoria cannabis</i>	fungus	yellow leaf spot	Regulated	5 or 7	3
<i>hemp mosaic virus</i>	virus	-	Regulated	7 or 8	3
<i>hemp streak virus</i>	virus	-	Regulated	7 or 8	3
<i>Pyrrhocoris apterus</i>	Insect	fire bug	Regulated	2	3
<i>Episyrphus balteatus</i>	Insect		Regulated	2	3
<i>Ischiodon scutellaris</i>	Insect	syrphid fly	Regulated	2	3
<i>Metasyrphus latifasciatus</i>	Insect	syrphid fly	Regulated	2	3
<i>Sphaerophoria scripta</i>	Insect	hover fly	Regulated	2	3
<i>Syritta pipiens</i>	Insect	hover fly	Regulated	2	3
<i>Aculops cannabiscola</i>	mite	hemp russett mite	Regulated	2	3
<i>Orobanche ramosa</i>	Weed	branched broomrape	Regulated	2	3
<i>Forficula auricularia</i>	Insect	European earwig	Non Regulated		
<i>Delia platura</i>	Insect	seedcorn maggot	Non Regulated		
<i>Nezara viridula</i>	Insect	green vegetable bug	Non Regulated		
<i>Mycosphaerella tassiana</i> (anamorph <i>Cladosporium herbarum</i>)	Fungus	black leaf spot	Non Regulated		
<i>Cochliobolus lunatus</i> (anamorph <i>Curvularia lunata</i>)	Fungus	leaf spot	Non Regulated		
<i>Pleospora herbarum</i> (anamorph <i>Stemphylium herbarum</i>)	Fungus	black mould rot	Non Regulated		
<i>Gibberella baccata</i>	Fungus	fusarium rot	Non		

(anamorph <i>Fusarium lateritium</i>)			Regulated		
<i>Botryotinia fuckeliana</i> (anamorph <i>Botrytis cinerea</i>)	Fungus	grey mould	Non Regulated		
<i>Alternaria alternate</i>	Fungus	black stalk rot	Non Regulated		
<i>Penicillium chrysogenum</i>	Fungus	-	Non Regulated		
<i>Agrobacterium tumefaciens</i>	Bacterium	crown gall	Non Regulated		
Alfalfa mosaic alfamovirus	Virus	-	Non Regulated		
Arabis mosaic nepovirus	Virus		Non Regulated		

Measures to prevent entry and establishment

1. No measures.
2. Seed and associated packaging inspected and found to be free from visually detectable regulated pests.
3. Consignments are free from extraneous material, e.g., soil, plant residue that may carry regulated pests.
4. Undergone effective treatment for regulated pests.
5. Undergone specified treatment for regulated pests.
6. Undergone specified testing for regulated pests.
7. Sourced from a pest free area.
8. Sourced from a pest free place of production.

Actions on interception

1. Removal of extraneous material, e.g., soil, plant residue that may carry regulated pests.
2. Treat (if appropriate), reship or destroy.
3. No action if pest not viable.

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Pisum*”.

Entry conditions for *Pisum* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) *Pests of Pisum*

Refer to “Pest List for *Pisum*”.

(ii) *Approved exporting countries*

Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, Taiwan, United Kingdom and United States of America.

(iii) *Documentation*

A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Pisum* seeds for sowing exported to New Zealand.

(iv) *Phytosanitary requirements*

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Pisum* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects on MAF’s “Pest List for *Pisum*” and seeds of regulated weed species.

AND

- sourced from a “Pest free area” or “Pest free place of production”, free from the named regulated viruses (*Broad bean mottle virus*, *Broad bean stain virus*, *Clover yellow mosaic virus*, *Pea early-browning virus*, *Pea enation mosaic virus*, *Peanut mottle virus*, *Peanut stunt virus*).

AND

EITHER

- sourced from a “Pest free area” free from *Cladosporium cladosporioides* f. sp. *pisicola*.

OR

- treated with one of the fungicide combinations described in MAF’s “Approved Treatments for *Pisum*”.

(v) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section (if applicable), and by providing the following additional declaration to the phytosanitary certificate:

"The *Pisum* seeds for sowing in this consignment have:

- sourced from a “Pest free area”, free from _____ (name of the regulated viruses) _____, and/or a “Pest free place of production”, free from _____ (name of the regulated viruses) _____.

AND

- [if appropriate] sourced from a “Pest free area”, free from *Cladosporium cladosporioides* f. sp. *pisicola*.

Approved Treatments for *Pisum*

Fungicides

One of the following treatments is required:

- i) Metalaxyl-M at 0.35 g a.i per kg of seed.
- ii) Captan at 0.8 g a.i per kg of seed.
- iii) Metalaxyl-M at 0.35 g a.i per kg of seed, fludioxonil at 0.1 g a.i per kg of seed and cymoxanil 0.2 g a.i per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Triticum*”.

Entry conditions for *Triticum* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) Pests of *Triticum*

Refer to “Pest List for *Triticum*”.

(ii) Approved exporting countries

Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States of America.

(iii) Documentation

A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Triticum* seeds for sowing exported to New Zealand.

(iv) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Triticum* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests, including the regulated insects and mites on MAF’s “Pest List for *Triticum*” and seeds of regulated weed species.

AND

- sourced from a “Pest free area” or “Pest free place of production”, free from the named regulated bacteria (*Rathayibacter tritici*, *Xanthomonas campestris* pv. *undulosa*, *Xanthomonas translucens* pv. *translucens*) and viruses (*High plains virus*, *Indian peanut clump virus*, *Wheat streak mosaic virus*).

AND

- sourced from a “Pest free area” or “Pest free place of production”, free from *Anguina tritici*, or inspected microscopically for *Anguina tritici* in accordance with appropriate official procedures .

AND

EITHER

- sourced from a “Pest free area” free from the named regulated fungi (*Alternaria triticina*, *Cephalosporium gramineum*, *Curvularia inaequalis*, *Curvularia verruculosa*).

OR

- treated with one of the fungicide combinations described in MAF’s “Approved Treatments for *Triticum*”;

AND

- sourced from a “Pest free area” free from *Tilletia controversa* and *Tilletia indica*

OR

- sourced from a “Pest free place of production”, free from *Tilletia controversa* and *Tilletia indica*, or a representative sample of 600 seeds, drawn from this consignment according to the International Seed Testing Association’s methodology, has been tested for *Tilletia controversa* and *Tilletia indica* AND treated with one of the fungicide combinations described in MAF’s “Approved Treatments for *Triticum*”.

(v) *Additional declarations to the phytosanitary certificate*

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section (if applicable), and by providing the following additional declaration to the phytosanitary certificate:

"The *Triticum* seeds for sowing in this consignment have been:

- sourced from a “Pest free area”, free from _____ (name of the regulated bacteria and viruses) _____, and/or a “Pest free place of production”, free from _____ (name of the regulated bacteria and viruses) _____.

AND

- sourced from a “Pest free area” or “Pest free place of production”, free from *Anguina tritici*, or inspected microscopically for *Anguina tritici* [choose ONE option].

AND

EITHER

- sourced from a “Pest free area”, free from _____ (name of the regulated fungi) _____;

OR

- sourced from a “Pest free place of production”, free from *Tilletia controversa* and *Tilletia indica*, or no spores of *Tilletia controversa* or *Tilletia indica* were found in a representative sample of 600 seeds drawn from this consignment [choose ONE option]."

Approved Treatments for *Triticum*

Fungicides

One of the following treatments is required:

- Carboxin at 0.8 g a.i. per kg of seed and Thiram at 0.8 g a.i. per k.g of seed.
- Flutriafol at 0.05 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.
- Triadimenol at 0.23 g a.i. per kg of seed, Imazalil 0.075 g per kg of seed and Fuberidazole 0.15g a.i per kg of seed.
- Tebuconazole at 0.025 g a.i. per kg of seed and Imazalil at 0.05 g a.i. per kg of seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Zea

Note: These entry conditions only apply to species in the Plants Biosecurity Index listed under Import Specifications for Seed as “see 155.02.05 under *Zea*”.

Entry conditions for *Zea* seeds for sowing from approved exporting countries

These requirements are in addition to the Basic requirements set out in Section 2 of the standard.

(i) Pests of *Zea*

Refer to “Pest List for *Zea*”.

(ii) Approved exporting countries

Australia, Austria, Canada, Chile, Finland, France, Germany, Greece, Hungary, the Netherlands, Norway, South Africa, Sweden, Switzerland, the United Kingdom and United States of America

(iii) Documentation

Phytosanitary certificate: A completed phytosanitary certificate issued by the NPPO of the exporting country must accompany all *Zea* seeds for sowing exported to New Zealand.

Genetically modified seed test certificate: MAF requires that all consignments of dent corn/field corn/maize (*Zea mays* var. *indentata*) and sweet corn (*Zea mays* var. *saccharata*) that are imported into New Zealand are tested for adventitious presence of unauthorized GM seeds. **Note:** For positive identification of imported consignments that do not require a GM seed test certificate, the full scientific name of the *Zea* species and variety (including variety or sub-species name) must be specified on the phytosanitary certificate, for e.g. *Zea mays* var. *everta* (pop corn). Importers of consignments of *Zea mays* that are not identified appropriately will be offered the options of testing for the presence of unauthorised genetically modified (GM) seeds, re-shipment or destruction.

(iv) Phytosanitary requirements

Before a phytosanitary certificate is issued, the NPPO of the exporting country must be satisfied that the following activities required by MAF have been undertaken.

The *Zea mays* seeds for sowing have been:

- inspected in accordance with appropriate official procedures and found to be free of any visually detectable regulated pests and regulated weed species, including the regulated insects and mites on MAF’s “Pest List for *Zea mays*”.

AND EITHER

- sourced from a “Pest free area” or “Pest free place of production”, free from the named regulated bacteria (*Acidovorax avenae* subsp. *Avenae*, *Clavibacter michiganensis* subsp. *nebraskensis*, *Pantoea stewartii* subsp. *stewartii*) and viruses (*High plains virus*, *Maize dwarf mosaic virus*, *Maize mottle chlorotic stunt virus*, *Wheat streak mosaic virus*).

OR

- a representative sample, officially drawn from this consignment according to ISTA or AOSA methodology, has been tested for the presence of the named regulated bacteria (*Acidovorax avenae* subsp. *avenae*, *Clavibacter michiganensis* subsp. *nebraskensis*, *Pantoea stewartii* subsp. *stewartii*) and viruses (*High plains virus*, *Maize dwarf mosaic virus*, *Maize chlorotic mottle virus*, *Wheat streak mosaic virus*). The testing and treatment requirements are specified in the following section.

AND EITHER

- sourced from a “Pest free area” free from the named regulated fungi (*Botryosphaeria zea*, *Cochliobolus pallescens*, *Cochliobolus tuberculatus*, *Claviceps gigantea*, *Ustilago maydis*, *Peronosclerospora heteropogoni*, *Peronosclerospora maydis*, *Peronosclerospora philippinensis*, *Peronosclerospora sacchari*, *Peronosclerospora sorghi*, *Phaeocystroma ambiguum*, *Sclerophthora rayssiae* var. *zea*, *Rhizopus maydis*, *Stenocarpella macrospora* and *Cephalosporium maydis*).
- OR
- treated with one of the fungicide combinations described in MAF’s “Approved Treatments for *Zea mays*”;

(v) Additional declarations to the phytosanitary certificate

If satisfied that the pre-shipment activities have been undertaken, the exporting country NPPO must confirm this by recording the treatments applied in the “Disinfestation and/or Disinfection Treatment” section (if applicable), and by providing the following additional declarations to the phytosanitary certificate:

"The *Zea mays* seeds for sowing in this consignment have been:

- sourced from a “Pest free area”, free from _____ (name of the regulated bacteria and viruses) _____, and/or a “Pest free place of production”, free from _____ (name of the regulated bacteria and viruses) _____ and/or _____ (name of the regulated bacteria and viruses) _____ was not detected in a representative sample of seeds officially drawn from this consignment.

AND

- [if appropriate] sourced from a “Pest free area”, free from _____ (name of the regulated fungi) _____;

Approved Testing and Treatment Requirements for *Zea mays*

Testing

Pantoea stewartii* subsp. *stewartii

A negative result from testing a representative sample of 400 seeds using the immunosorbent assay test described by Lamka *et al.* (1991) may be used to show that the consignment is free of *Pantoea stewartii* subsp. *stewartii*.

Clavibacter michiganensis* subsp. *nebraskensis

A negative result from testing a representative sample of 400 seeds using the sCNS Culture Plate Method (Shepherd, 1999; www.seedhealth.org) may be used to show that the consignment is free of *Clavibacter michiganensis* subsp. *nebraskensis*.

Acidovorax avenae* subsp. *avenae

A negative result from testing a representative sample of 400 seeds using the methodology of Dange *et al.* (1978) may be used to show that the consignment is free of *Acidovorax avenae* subsp. *avenae*.

High plains virus, Maize dwarf mosaic virus and Wheat streak mosaic virus

A negative result from testing a representative sample of seeds using greenhouse grow-out tests and ELISA testing as described by Forster *et al.* (2001) and Crop Plant Compendium 2003 may be used to show that the consignment is free of *High plains virus, Maize dwarf mosaic virus* and *Wheat streak mosaic virus*.

Maize chlorotic mottle virus

Due to the low levels of seed transmission MAF will consider testing based upon request and will calculate the sample size required based upon the size of the consignment and at 95% confidence levels.

N.B – MAF will consider equivalent testing methods to the above upon request.

Treatments

Fungicides

The active ingredients in one of the following treatments are required:

- (i) Carboxin at 0.8 g a.i. per kg seed & thiram at 0.8 g a.i. per kg seed.
- (ii) Carboxin at 0.8 g a.i. per kg seed & captan at 0.7 g a.i. per kg seed.
- (iii) Fludioxonil at 0.025 g a.i. per kg seed & metalaxyl at 0.03 g a.i. per kg seed.
- (iv) Imazalil at 80 mg a.i. per kg seed & triadimenol at 220 mg a.i. per kg seed.
- (v) Imazalil at 80 mg a.i. per kg seed & flutriafol at 80 mg a.i. per kg seed.
- (vi) Difenoconazole at 0.12 g a.i. per kg seed & mefenoxam at 0.01g a.i. per kg seed.
- (vii) Fludioxonil at 0.025 g a.i. per kg seed & mefenoxam at 0.01 g a.i. per kg seed.

As required, MAF may evaluate other treatments and if effective, will approve these treatments and add them to this schedule.

Sampling and testing for adventitious presence of *Zea mays* seed consignments with unauthorized genetically modified seeds

MAF requires that all consignments of dent corn/field corn/maize (*Zea mays* var. *indentata*) and sweet corn (*Zea mays* var. *saccharata*) that are imported into New Zealand are representatively sampled, tested, and found to be free of unauthorized GM seeds. Any consignment that is found to contain unauthorized GM seeds will not be permitted to enter New Zealand and will be re-shipped or destroyed. Complete guidelines for testing and sampling for the presence of unauthorized GM seeds are specified in the *Protocol for testing imports of Zea mays seed for sowing for the presence of genetically modified seed*. The protocol includes three further modified options for importers of small quantities (defined as weighing less than 5 kg per line) of seeds for cultivar trials and/or multiplication.

Testing may be conducted offshore by facilities approved by MAF under the requirements specified in the standard PIT.GMO.AFGMOT *Approval of Facilities for Genetically Modified Organism Testing*. A copy of the completed test certificate (from a MAF-approved facility) must accompany the consignment imported into New Zealand. MAF will examine the test certificate on arrival to confirm that they reconcile with the actual consignment. Importers must ensure that MAF has access to all pertinent testing records held by MAF-approved testing facilities for audit purposes.

If consignments arrive at the New Zealand border without having been tested for the presence of unauthorized GM seeds, MAF will offer the importer the options of re-shipping or destroying the consignment, or having the consignment sampled and tested as above under the importer's expense. Only consignments found not to contain GM seeds will receive biosecurity clearance.

The protocol, the standard – PIT.GMO.AFGMOT, and a list of MAF-approved facilities for testing for the presence of GM material in *Zea mays* are located at the following address on the MAF website -

<http://www.maf.govt.nz/biosecurity/imports/plants/genetically-modified-organisms.htm>

References

Dange SRS, Payak MM, Renfro BL, 1978. Seed transmission of *Pseudomonas rubrilineans*, the incitant of bacterial leaf stripe of maize. *Indian Phytopathology*, 31(4):523-524.

Forster RL, Seifers DL, Strausbaugh CA, Jensen SG, Ball EM, Harvey TL, 2001. Seed transmission of the *High Plains virus* in sweet corn. *Plant Disease*, 85(7):696-699

Lamka, G L; Hill, J H; McGee, D C; and Braun, E J. 1991: Development of an immunosorbent assay for seedborne *Pantoea stewartii* subsp. *stewartii* in corn seeds. *Phytopathology* 81:839-846

Shepherd, L.M. 1999: Detection and transmission of *Clavibacter michiganensis* subsp. *nebraskensis* of corn. Ms Thesis, Iowa State University, Ames, IA.