

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, Hungary, the Netherlands, Norway, 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 contamination with 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 unauthorized 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 weed species, including the regulated insects, mites and weed seeds on MAF’s “Pest List for *Zea mays*”.

AND

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

AND

- sourced from a “Pest free area” or “Pest free place of production” free from *Pantoea stewartii* subsp. *stewartii* or a representative sample of 600 seeds, officially drawn from this consignment according to ISTA methodology, has been tested for the presence of *Pantoea stewartii* subsp. *stewartii*.

AND

- sourced from a “Pest free area” free from the named regulated fungi (*Botryosphaeria zeae*,

Cochliobolus pallescens, *Cochliobolus tuberculatus*, *Claviceps gigantea*, *Ustilago maydis*, *Peronosclerospora heteropogoni*, *Peronosclerospora maydis*, *Peronosclerospora philippinensis*, *Peronosclerospora sacchari*, *Peronosclerospora sorghi*, *Phaeocystostroma ambiguum*, *Sclerophthora rayssiae* var. *zeae*, *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

- sourced from a "Pest free area" or a "Pest free place of production", free from *Pantoea stewartii* subsp. *stewartii*

OR

- *Pantoea stewartii* subsp. *stewartii* was not detected in a representative sample of 600 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 Treatments for *Zea mays*

Testing for *Pantoea stewartii* subsp. *stewartii*

A negative result from 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*.

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) Difenconazole at 0.12 g a.i. per kg seed & mefenoxam at 0.02g a.i. per kg seed.
- (vii) Fludioxonil at 0.025 g a.i. per kg seed & mefenoxam at 0.02 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.

Note. Where the treatment can not be applied offshore, the seed consignment may be treated on arrival at a registered transitional facility (New Zealand Ministry of Agriculture and Forestry Regulatory Authority Standard 152.04.03F: *Requirements for holding and processing facilities for uncleared risk goods*).

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

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

Pest List for *Zea* (Seed for Sowing)

Scientific name	Organism type	Common name	Quarantine status	Measures to prevent entry	Actions on interception
<i>Acidovorax avenae</i> subsp. <i>avenae</i>	bacterium	bacterial blight	Regulated	7 or 8	3
<i>Clavibacter michiganensis</i> subsp. <i>nebraskensis</i>	bacterium	Goss' bacterial wilt	Regulated	7 or 8	3
<i>Pantoea stewartii</i>	bacterium	Stewart's bacterial wilt	Regulated	6 or 7 or 8	3
<i>Botryosphaeria zeae</i>	fungus	grey ear rot	Regulated	5 or 7	3
<i>Cephalosporium maydis</i>	fungus	-	Regulated	5 or 7	3
<i>Claviceps gigantea</i>	fungus	ergot	Regulated	5 or 7	3
<i>Cochliobolus pallescens</i>	fungus	maize leaf spot	Regulated	5 or 7	3
<i>Cochliobolus tuberculatus</i>	fungus	leaf spot	Regulated	5 or 7	3
<i>Peronosclerospora heteropogoni</i>	fungus	-	Regulated	5 or 7	3
<i>Peronosclerospora maydis</i>	fungus	Java downy mildew	Regulated	5 or 7	3
<i>Peronosclerospora philippinensis</i>	fungus	Philippine downy mildew	Regulated	5 or 7	3
<i>Peronosclerospora sacchari</i>	fungus	-	Regulated	5 or 7	3
<i>Peronosclerospora sorghi</i>	fungus	sorghum downy mildew	Regulated	5 or 7	3
<i>Phaeocytostroma ambiguum</i>	fungus	-	Regulated	5 or 7	3
<i>Rhizopus maydis</i>	fungus	rhizopus seed rot	Regulated	5 or 7	3
<i>Sclerophthora rayssiae</i> var. <i>zeae</i>	fungus	-	Regulated	5 or 7	3
<i>Stenocarpella macrospora</i>	fungus	dry rot	Regulated	5 or 7	3
<i>Ustilago maydis</i>	fungus	boil smut	Regulated	5 or 7	3
<i>Alphitobius laevigatus</i>	insect	black fungus beetle	Regulated	2	3
<i>Attagenus unicolor</i>	insect	black carpet beetle	Regulated	2	3
<i>Carpophilus freemani</i>	insect	dried fruit beetle	Regulated	2	3
<i>Carpophilus lugubris</i>	insect	dusky sap beetle	Regulated	2	3
<i>Cathartus quadricollis</i>	insect	squarenecked grain beetle	Regulated	2	3
<i>Caulophilus oryzae</i>	insect	broadnosed grain weevil	Regulated	2	3
<i>Corcyra cephalonica</i>	insect	rice moth	Regulated	2	3
<i>Cryptophlebia leucotreta</i>	insect	false codling moth	Regulated	2	3
<i>Cynaesus angustus</i>	insect	larger black flour beetle	Regulated	2	3
<i>Dinoderus distinctus</i>	insect	bostrichid beetle	Regulated	2	3
<i>Dinoderus minutus</i>	insect	bamboo powderpost beetle	Regulated	2	3
<i>Doloessa viridis</i>	insect	-	Regulated	2	3
<i>Euxesta stigmatias</i>	insect	-	Regulated	2	3
<i>Gibbium psylloides</i>	insect	shiny spider beetle	Regulated	2	3
<i>Glischrochilus quadrisignatus</i>	insect	four-spotted sap beetle	Regulated	2	3
<i>Gnaticerus maxillosus</i>	insect	slenderhorned flour	Regulated	2	3

		beetle			
<i>Latheticus oryzae</i>	insect	longheaded flour beetle	Regulated	2	3
<i>Lepinotus reticulatus</i>	insect	booklouse	Regulated	2	3
<i>Leptoglossus zonatus</i>	insect	coreid bug	Regulated	2	3
<i>Liposcelis bostrychophilus</i>	insect	booklouse	Regulated	2	3
<i>Liposcelis entomophilus</i>	insect	grain psocid	Regulated	2	3
<i>Liposcelis paetus</i>	insect	booklouse	Regulated	2	3
<i>Mussidia nigrivenella</i>	insect	pyralid moth	Regulated	2	3
<i>Pagiocerus frontalis</i>	insect	bark borer	Regulated	2	3
<i>Palorus ratzeburgi</i>	insect	smalleyed flour beetle	Regulated	2	3
<i>Palorus subdepressus</i>	insect	depressed flour beetle	Regulated	2	3
<i>Paralipsa gularis</i>	insect	stored nut moth	Regulated	2	3
<i>Pharaxonotha kirschil</i>	insect	Mexican grain beetle	Regulated	2	3
<i>Prostephanus truncatus</i>	insect	larger grain borer	Regulated	2	3
<i>Pyroderces rileyi</i>	insect	pink scavenger caterpillar	Regulated	2	3
<i>Sesamia calamistis</i>	insect	pink stalk borer	Regulated	2	3
<i>Sesamia nonagrioides</i>	insect	pink borer	Regulated	2	3
<i>Teretriosoma nigrescens</i>	insect	-	Regulated	2	3
<i>Tribolium freemani</i>	insect	flour beetle	Regulated	2	3
<i>Trogoderma glabrum</i>	insect	khapra beetle	Regulated	2	3
<i>Trogoderma granarium</i>	insect	khapra beetle	Regulated	2	3
<i>Trogoderma inclusum</i>	insect	trogoderma beetle	Regulated	2	3
<i>Trogoderma variabile</i>	insect	warehouse beetle	Regulated	2	3
<i>Acaropsellina sollers</i>	mite	-	Regulated	2	3
<i>High plains virus</i>	virus	-	Regulated	7 or 8	3
<i>Maize chlorotic mottle virus</i>	virus	-	Regulated	7 or 8	3
<i>Maize dwarf mosaic virus</i>	virus	MDMV	Regulated	7 or 8	3
<i>Wheat streak mosaic virus</i>	virus	WSMV	Regulated	7 or 8	3
<i>Striga asiatica</i>	weed	witch-weed	Regulated	2	3
<i>Striga hermonthica</i>	weed	witch-weed	Regulated	2	3
<i>Bacillus cereus</i>	bacterium	-	Non Regulated		
<i>Burkholderia andropogonis</i>	bacterium	leaf spot	Non Regulated		
<i>Erwinia carotovora</i> subsp. <i>carotovora</i>	bacterium	bacterial soft rot	Non Regulated		
<i>Erwinia chrysanthemi</i>	bacterium	bacterial soft rot	Non Regulated		
<i>Erwinia chrysanthemi</i> pv. <i>zeae</i>	bacterium	bacterial soft rot	Non Regulated		
<i>Erwinia herbicola</i>	bacterium	purple stain	Non Regulated		
<i>Pseudomonas marginalis</i>	bacterium	soft rot	Non Regulated		
<i>Pseudomonas syringae</i> pv. <i>coronafaciens</i>	bacterium	halo blight	Non Regulated		
<i>Acremonium strictum</i>	fungus	leaf spot	Non Regulated		
<i>Alternaria alternata</i>	fungus	black stalk rot	Non Regulated		
<i>Ascochyta sorghi</i>	fungus	rough leaf spot disease	Non Regulated		
<i>Athelia rolfsii</i> (anamorph <i>Sclerotium rolfsii</i>)	fungus	Rolf's disease	Non Regulated		

<i>Aureobasidium zeae</i>	fungus	eyespot	Non Regulated		
<i>Botryosphaeria rhodina</i> (anamorph <i>Lasiodiplodia theobromae</i>)	fungus	gummosis	Non Regulated		
<i>Botryotinia fuckeliana</i> (anamorph <i>Botrytis cinerea</i>)	fungus	grey mould	Non Regulated		
<i>Chaetomium globosum</i>	fungus	-	Non Regulated		
<i>Cladosporium cladosporioides</i>	fungus	cladosporium leaf spot	Non Regulated		
<i>Cladosporium sphaerospermum</i>	fungus	-	Non Regulated		
<i>Cochliobolus carbonum</i>	fungus	seedling blight	Non Regulated		
<i>Cochliobolus heterostrophus</i>	fungus	leaf and petal spot	Non Regulated		
<i>Cochliobolus lunatus</i>	fungus	leaf spot	Non Regulated		
<i>Cochliobolus sativus</i>	fungus	leaf spot	Non Regulated		
<i>Curvularia clavata</i>	fungus	leaf spot	Non Regulated		
<i>Curvularia intermedia</i>	fungus	leaf spot, leaf blight	Non Regulated		
<i>Dipodascus geotrichum</i>	fungus	sour rot	Non Regulated		
<i>Fusarium anthophilum</i>	fungus	root and stem rot	Non Regulated		
<i>Fusarium chlamydosporum</i>	fungus	root and stem rot	Non Regulated		
<i>Fusarium compactum</i>	fungus	-	Non Regulated		
<i>Fusarium crookwellense</i>	fungus	seed potato rot	Non Regulated		
<i>Fusarium culmorum</i>	fungus	dry rot	Non Regulated		
<i>Fusarium oxysporum</i>	fungus	leaf spot	Non Regulated		
<i>Fusarium pallidoroseum</i>	fungus	fusarium rot	Non Regulated		
<i>Fusarium poae</i>	fungus	fusarium rot	Non Regulated		
<i>Fusarium proliferatum</i>	fungus	mould	Non Regulated		
<i>Fusarium redolens</i>	fungus	root and stem rot	Non Regulated		
<i>Fusarium sacchari</i>	fungus	decline	Non Regulated		
<i>Gibberella acuminata</i>	fungus	fusarium storage rot	Non Regulated		
<i>Gibberella avenacea</i>	fungus	fusarium stem canker	Non Regulated		
<i>Gibberella cyanogena</i>	fungus	fusarium stem canker	Non Regulated		
<i>Gibberella fujikuroi</i>	fungus	fusarium rot	Non Regulated		
<i>Gibberella intricans</i>	fungus	root and stem dry rot	Non Regulated		
<i>Gibberella subglutinans</i>	fungus	fusarium rot	Non Regulated		
<i>Gibberella zeae</i>	fungus	headblight of maize	Non Regulated		
<i>Glomerella graminicola</i>	fungus	anthracnose	Non Regulated		
<i>Gonatobotrys simplex</i>	fungus	ear rot	Non Regulated		
<i>Hypocrea ceramica</i>	fungus	trichoderma rot	Non Regulated		
<i>Khuskia oryzae</i>	fungus	rot	Non Regulated		
<i>Macrophomina phaseolina</i>	fungus	ashy stem blight	Non Regulated		
<i>Monographella nivalis</i>	fungus	snow mould	Non Regulated		
<i>Mycosphaerella tassiana</i>	fungus	black leaf spot	Non Regulated		
<i>Nectria haematococca</i>	fungus	fusarium fruit rot	Non Regulated		
<i>Nigrospora sacchari</i>	fungus	-	Non Regulated		
<i>Puccinia sorghi</i>	fungus	maize rust	Non Regulated		
<i>Pyrenochaeta terrestris</i>	fungus	pink root rot	Non Regulated		

<i>Pythium debaryanum</i>	fungus	leak	Non Regulated		
<i>Pythium paroecandrum</i>	fungus	pythium root and stem rot	Non Regulated		
<i>Pythium spinosum</i>	fungus	pythium root rot	Non Regulated		
<i>Pythium ultimum</i>	fungus	leak	Non Regulated		
<i>Saccharomyces cerevisiae</i>	fungus	-	Non Regulated		
<i>Sclerophthora macrospora</i>	fungus	crazy top	Non Regulated		
<i>Sclerotinia sclerotiorum</i>	fungus	cottony rot	Non Regulated		
<i>Setosphaeria rostrata</i>	fungus	leaf blight	Non Regulated		
<i>Setosphaeria turcica</i>	fungus	leaf spot	Non Regulated		
<i>Sporisorium holci-sorghii</i>	fungus	head smut	Non Regulated		
<i>Stenocarpella maydis</i>	fungus	cob rot	Non Regulated		
<i>Thanatephorus cucumeris</i>	fungus	rhizoctonia rot	Non Regulated		
<i>Trichoderma viride</i>	fungus	trichoderma rot	Non Regulated		
<i>Trichothecium roseum</i>	fungus	pink rot	Non Regulated		
<i>Waitea circinata</i>	fungus	-	Non Regulated		
<i>Acanthoscelides obtectus</i>	insect	bean weevil	Non Regulated		
<i>Ahasverus advena</i>	insect	foreign grain beetle	Non Regulated		
<i>Alphitobius diaperinus</i>	insect	lesser mealworm	Non Regulated		
<i>Anthrenus verbasci</i>	insect	varied carpet beetle	Non Regulated		
<i>Araecerus fasciculatus</i>	insect	coffee bean weevil	Non Regulated		
<i>Carpophilus dimidiatus</i>	insect	corn sap beetle	Non Regulated		
<i>Carpophilus hemipterus</i>	insect	dried fruit beetle	Non Regulated		
<i>Clivina rugithorax</i>	insect	maize seed beetle	Non Regulated		
<i>Cryptolestes ferrugineus</i>	insect	rusty grain beetle	Non Regulated		
<i>Cryptolestes pusilloides</i>	insect	flat grain beetle	Non Regulated		
<i>Cryptolestes pusillus</i>	insect	flat grain beetle	Non Regulated		
<i>Endrosis sarcitrella</i>	insect	whiteshouldered house moth	Non Regulated		
<i>Ephestia cautella</i>	insect	tropical warehouse moth	Non Regulated		
<i>Ephestia elutella</i>	insect	tobacco moth	Non Regulated		
<i>Ephestia kuehniella</i>	insect	Mediterranean flour moth	Non Regulated		
<i>Gnatocerus cornutus</i>	insect	broadhorned flour beetle	Non Regulated		
<i>Hofmannophila pseudospretella</i>	insect	-	Non Regulated		
<i>Lasioderma serricorne</i>	insect	cigarette beetle	Non Regulated		
<i>Lepinotus inquilinus</i>	insect	grain psocid	Non Regulated		
<i>Listronotus bonariensis</i>	insect	Argentine stem weevil	Non Regulated		
<i>Lyctocoris campestris</i>	insect	-	Non Regulated		
<i>Nemapogon granella</i>	insect	European grain moth	Non Regulated		
<i>Nysius huttoni</i>	insect	wheat bug	Non Regulated		
<i>Oryzaephilus mercator</i>	insect	merchant grain beetle	Non Regulated		
<i>Oryzaephilus surinamensis</i>	insect	sawtoothed grain beetle	Non Regulated		
<i>Plodia interpunctella</i>	insect	Indian meal moth	Non Regulated		
<i>Rhyzopertha dominica</i>	insect	lesser grain borer	Non Regulated		
<i>Sitophilus granarius</i>	insect	granary weevil	Non Regulated		

<i>Sitophilus oryzae</i>	insect	rice weevil	Non Regulated		
<i>Sitophilus zeamais</i>	insect	maize weevil	Non Regulated		
<i>Sitotroga cerealella</i>	insect	angoumois grain moth	Non Regulated		
<i>Stegobium paniceum</i>	insect	drugstore beetle	Non Regulated		
<i>Tenebrio molitor</i>	insect	yellow mealworm	Non Regulated		
<i>Tenebrio obscurus</i>	insect	dark mealworm	Non Regulated		
<i>Tenebroides mauritanicus</i>	insect	cadelle	Non Regulated		
<i>Tribolium castaneum</i>	insect	red flour beetle	Non Regulated		
<i>Tribolium confusum</i>	insect	confused flour beetle	Non Regulated		
<i>Urophorus humeralis</i>	insect	dried fruit beetle	Non Regulated		
<i>Acarus siro</i>	mite	grain mite	Non Regulated		
<i>Lepidoglyphus destructor</i>	mite	grocers' itch mite	Non Regulated		
<i>Tyrophagus longior</i>	mite	seed mite	Non Regulated		
<i>Tyrophagus putrescentiae</i>	mite	mould mite	Non Regulated		
<i>Barley stripe mosaic virus</i>	virus	BSMV	Non Regulated		
<i>Barley yellow dwarf virus</i>	virus	BYDV	Non Regulated		
<i>Cucumber mosaic virus</i>	virus	CMV	Non Regulated		
<i>Sugarcane mosaic virus</i>	virus	SCMV	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 pre-export treatment for regulated pests.
5. Undergone specified pre-export treatment for regulated pests.
6. Undergone specified pre-export testing for regulated pests.
7. Sourced from a pest free area.
8. Sourced from a pest free place of production.

Actions on interception

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