

Analysis of submissions on the draft import health schedule for *Zea mays* (maize) seed for sowing (Released for consultation on 21 January 2005)

Three submissions were received regarding the draft import health schedule between February and March 2005. These were submitted by:

Overseas organisations

1. Snowy River Seeds Australia
2. Syngenta Seeds Australia

New Zealand organisations

1. Genetic Technologies/ Pioneer Hi Bred

This document records the issues raised in the submissions and how these have been addressed by the Ministry of Agriculture and Forestry, Biosecurity New Zealand (MAF Biosecurity). Comments from submitters are reproduced in **bold text** and the responses are recorded in normal text.

Overseas organisations

Snowy River Seeds Australia

I would like to know what is MAF's definition of " Pest free Area and of Pest free place of production.

Our seed crops are inspected by the DPI Victoria and any plants with disease are tested and over the last 5 seasons we have had no viruses detected.

MAF Biosecurity New Zealand currently accepts the system by which Australia establishes pest free areas and pest free place of production to be in accordance with the international standards for phytosanitary measures and will continue to accept such declarations from the Department of Agriculture, Fisheries & Forestry.

MAF accepts the International Plant Protection Convention's definition of a Pest free area and pest free place of production as follows:

Pest free area

An area (i.e country or state freedom) in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained [FAO, 1995; ISPM Pub. No. 4]

Pest free place of production

Place of production in which a specific pest does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained for a defined period [ISPM Pub. No. 10, 1999]

Syngenta Seeds Australia

In response to your offer of consultation regarding “Draft *Zea mays* Import Health Standard” we wish to raise our concern at the lack of notice to the proposed changes. The production cycles for sweet corn seed are such that:

- **Sales of sweet corn seed into New Zealand for 2005 are from existing stock produced under current import regulations.**
- **Sales of sweet corn seed into New Zealand for 2006 will come from seed produced in 2005 for which planning has been completed under current New Zealand import regulations.**

Therefore, in order to guarantee supply to the major New Zealand food processors (Syngenta being the major supplier), we would request that the implementation of the new import regulations be delayed until 1st December 2006.

MAF consider that it is not necessary to delay the implementation of the new import regulations due to the flexibility of options in the new import health standard. The most significant change to the phytosanitary requirements is to the fungal pest list and these pests are already managed by measures that are currently in place. For example, seed can either be sourced from “Pest free areas” free from the regulated fungal pests or undergo fungicide treatment.

In addition, Syngenta would urge MAF to fully investigate the reports from the Grains Research & Development Corporation (GRDC) that wheat streak mosaic virus (WSMV) is already present in New Zealand. If this is the case, we would question the need or requirement to adopt measures to prevent the possible entry of pathogens already known to exist, when such measures would only result in significantly increased seed production costs (in the case of sweet corn) that could ultimately affect the viability of the food processing industry.

The GRDC article can be found at the following web site:

<http://www.grdc.com.au/growers/as/wsmv.htm>

We hope these comments are constructive in helping your decision making process. Please feel free to contact us for any further information you may require.

In response to Syngenta’s request to investigate the report from GRDC that wheat streak mosaic virus (WSMV) may be present in New Zealand, MAF has investigated this report and can find no evidence to suggest that WSMV is present in New Zealand. There have been no confirmed identifications or reports received by MAF to alert us to its presence in New Zealand. This regulated virus is notifiable and if

WSMV was established in New Zealand it would have been found and reported by researchers, plant breeders and government officials that work on *Zea mays*. If new information comes to hand to confirm that this virus is established in New Zealand it will be removed from the maize regulated pest list.

MAF has revised the measures for the regulated viral pests of *Zea mays* and have included pre-export testing as a further measure to provide an alternative to pest free area or pest free place of production.

New Zealand organisations

Genetic Technologies Ltd:

(ii) Approved Exporting Countries

The list of approved countries includes those from which Genetic Technologies is currently importing maize seed from. However, significant seed is also produced in Argentina and Mexico so there may in future be a requirement to include these countries.

With the recent revision of the importation requirements for *Zea mays* seed MAF is now assessing requests for importations from new (currently non-approved) countries. MAF has recently contacted Argentina requesting information on pests associated with *Zea mays* seed in Argentina, and how they would meet MAF's requirements.

(iii) Documentation

The MAF webpage for GM seed testing lists the following laboratories for seed testing:

**Eurofins Scientific, Nantes, France (formerly AgroGene SA)
Agriquality GMO Services (formerly GeneScan Australia Pty Ltd.)
GeneScan USA, Inc., New Orleans**

Other companies, including seed companies should have the option of testing seed for the presence of “unauthorized GM seeds.”

MAF will consider the accreditation of new laboratories to test for the presence of genetic modification (GM) upon request from industry. However, when MAF assesses a request to accredit a new GM testing laboratory, this laboratory must be able to demonstrate impartiality and that it is operated by an independent 3rd party. Costs will be recovered from industry in accordance with the MAF cost recovery policy.

Seed companies would seek the assurance that MAF approval of the laboratories is current at the time of commencement of the testing season (an effective date may need to be agreed to). This request is made against the background of the cancellation of Biogenetic Services accreditation in April last year and the subsequent withdrawal of “freedom from” certificates” issued over the previous year. This as you are aware caused some down stream effects for at least one seed company.

MAF will plan audit times of accredited GM testing laboratories with the intention to not coincide with the offshore testing *Zea mays* season. However, it should be noted that in the event of a laboratory being suspended it is not always possible to contain all downstream effects to industry.

The MAF draft refers to *Zea mays* var, *indentata* and *saccharata*. In our view the races should either not be stated or all should be stated e.g. flint maize would seem to be excluded by the currently stated ‘Entry Conditions.’

The entry conditions in this proposed import health standard applies to all species of the *Zea* genera listed in the plants biosecurity index <http://www1.maf.govt.nz/cgi-bin/bioindex/bioindex.pl>. All races of *Zea mays* are permitted to be imported into New Zealand under this import health standard. Where MAF has specified races in the import health standard it is in reference to the requirement for GM testing. MAF require *Zea mays* var. *indentata* and *Zea mays* var. *saccharata* to be tested for GM. Therefore, for positive identification of *Zea mays* consignments that do not require testing the full scientific name including the variety/race must be specified.

(iv) Phytosanitary Requirements

The first clause on inspections is covered by the US NSHS field inspection procedures were field inspections note all pests found and do not usually take particular note of a list of ‘specified’ pests.

With *Striga* spp., the US can declare area freedom for these as only North and South Carolina are known to have these pests.

MAF considers the systems by which the USA conducts inspections and declares pest free areas to be in accordance with international standards and will continue to accept such declarations.

Certifying officials may have an issue over the viruses: High Plains, MDMV...etc in areas where these occur and as a result we would suggest the option to test for viruses where a test is available. The issue of testing vs inspection has been a particular problem with MDMV.

MAF has reviewed this request and consider that the risks associated with some of the regulated pathogens could be managed by testing. MAF have now included the option of pre-export testing for the following regulated bacteria and viruses; *Clavibacter michiganensis* subsp. *nebraskensis*, *Acidovorax avenae* subsp. *avenae*, *High plains virus*, *Maize dwarf mosaic virus*, *Maize chlorotic mottle virus* and *Wheat streak mosaic virus*.

The requirement that the Stewart’s Wilt test be based on a 600 seed sample is a departure from the usual sample size of 400 seeds. We would suggest that the number of seeds be changed in order to prevent the possibility of testing the same lot of seed multiple times for the same pest depending on the requirements of the importing country. (If the seed field is found to be free of Stewart’s upon field inspection, the testing requirement is moot, but this may not always be the case.)

MAF has reviewed the sampling and testing methodology and agree that the sample size of 400 seeds will provide enough assurance that the consignment is free of *Pantoea stewartii*, providing a representative sample has been drawn according to ISTA or AOSA sampling methodology.

We would note that it will not be possible to get field inspections certifying “freedom from” all the fungi listed. However the list of fungicides permitted for use as seed treatment is extensive so most exporters can treat the seed to satisfy this requirement.

(v) Additional Declarations to the phytosanitary certificate

The wording here implies that ALL the regulated bacteria, viruses and fungi must be individually listed in the AD, i.e. four viruses, three bacteria and, if not seed treated, 15 fungi.

The option to treat with MAF’s approved fungicide treatment should be included.

The additional declaration section in the draft import health schedule does state that 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. This is in accordance with the International Standard for Phytosanitary Measures (ISPM) No. 12 “Guidelines for phytosanitary certificates” that additional declarations should only contain information not otherwise noted on the certificate. Treatments are to be indicated in section III of the phytosanitary certificate.

General Comments:

We would suggest that the maize pest lists may need some re-evaluation as seed transmission for the following fungi has not been shown to occur to the best of our knowledge:

Botryosphaeria zaeae, Cochliobolus pallescens, Ustilago maydis, Peronosclerospora heteropogoni, Cephalosporium maydis

***Cochliobolus tuberculatus* is a pest (leaf spot) of chickpea and coconut. There is no mention of maize as a host. In addition the PRA spreadsheet notes that the affected plant parts are leaves not seeds! There is no evidence presented to show the pest is seed transmitted or seed borne.**

CABI records *Ustilago maydis* as not seed transmitted but notes it is seed borne.

In response to your request to re-evaluate the maize pest list, MAF has reviewed the justification for their presence and have concluded the following:

Botryosphaeria zaeae, Cochliobolus pallescens, Ustilago maydis, Peronosclerospora heteropogoni and *Cephalosporium maydis* have been reported to be seedborne and have the ability to over winter on soil and/or maize residue (Maize diseases. A reference source for seed technologists - McGee 1994; Crop Protection Compendium database 2003). These fungi have the potential to infect maize by spores causing infections of the stem at ground level, or infect via the roots or infections may arise from airborne spores deposited in the leaf whorl of developing plants.

Cochliobolus tuberculatus (anamorph *Curvularia tuberculata*) has been recorded on *Zea mays* and several grass species (McGee, 1994). This pathogen survives in soil, and on maize debris, until the following season.

MAF accepts that the probability of seed transmission may be low but considering the above, the potential volume of shipments and the likely level of soil and maize debris present these pathogens will remain on the regulated pest list for *Zea mays* seed for sowing.

MDMV/SCMV and *Stenocarpella macrospora* are commonly found virtually everywhere else in the world. In particular the *Stenocarpella* complex is likely to already to be in New Zealand.

The above pests have never been recorded in New Zealand. These regulated pests are notifiable and if they were established in New Zealand they would have been found and reported by researchers, plant breeders and government officials that work on *Zea mays*. If new information comes to hand to suggest that these regulated pests are established in New Zealand they will be removed from the maize regulated pest list.