



The Food and Environment  
Research Agency

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# Phytosanitary Certification of Grain for Export

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- This leaflet explains the arrangements for the issue of phytosanitary certificates for export of grain to those third countries (i.e. countries outside the European Community) requiring such certification, including the procedures for sampling and inspection of grain by authorised trade representatives.
- **Please read this leaflet and the notes on the application form very carefully.** If you are unclear on any points please do not hesitate to seek advice from your local Fera Plant Health and Seeds Inspector Office. Contact details can be found on the Fera website at: [www.defra.gov.uk/fera/contactUs/contactPIh.cfm](http://www.defra.gov.uk/fera/contactUs/contactPIh.cfm)

or, in Scotland, your local SGRPID Agricultural Officer or Plant Health office at:

The Scottish Government Rural Payments and Inspections Directorate  
Plants, Horticulture and Potatoes Branch,  
Pentland House, 47 Robb's Loan, Edinburgh, EH14 1TY  
Tel: 0131 244 8400 Ext: 6345  
e-Mail: [php@scotland.gsi.gov.uk](mailto:php@scotland.gsi.gov.uk)



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

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## General information

This document sets out the arrangements for the sampling, inspection and phytosanitary certification of grain for export to those third countries requiring such certification. It does not cover any matters other than those relating to plant health, e.g. human or animal health matters.

1. The plant health requirements of third countries are laid down by the relevant authorities in each country and vary from country to country. Phytosanitary (plant health) certificates provide an assurance that consignments of plants and plant products (including grain) meet the required plant health standards of the importing country. Certificates are issued by:

- The Food and Environment Research Agency (Fera) facilitate exports from England;
- Fera on behalf of the Welsh Assembly Government (WAG) for exports from Wales; and
- the Scottish Government Rural Payments and Inspections Directorate (SGRPID) for Scotland.

These are hereafter referred to as the 'Agricultural Departments'.

Under single market arrangements phytosanitary certificates are not required for trade with other EC countries.

2. A list of the countries which it is believed require phytosanitary certificates for grain exports is given at Annex I. For further information or details on the requirements of countries other than those listed exporters should contact their local Fera Plant Health and Seeds Inspector (PHSI), or SGRPID Agricultural Officer giving as much notice as possible prior to the date of export. It should be appreciated that details of the relevant import regulations may not be available immediately and the Agricultural Departments may have to contact the plant health authorities in the countries concerned to obtain the required information.

3. It is the responsibility of exporters to ensure that dockside storage facilities and the holds of ships are free from infestation before loading. The trade have provided assurances that, as far as is practicable, silos or other stores into which grain is loaded following inspection will be free from infestation and that the inspected grain will not thereby become infested. If, however, infestation is subsequently discovered or considered likely

to be present following checks undertaken for commercial purposes, the matter must be reported to the appropriate Agricultural Department and no phytosanitary certificate will be issued for this grain until disinfection arrangements have been carried out in accordance with the procedures agreed between GAFTA and the Agricultural Departments - see paragraphs 34 and 35 and Annex IV.

4. Authorised trade inspectors (hereinafter referred to as 'trade inspectors') will undertake the inspection of grain for official phytosanitary certification and, in so doing, will act for and on behalf of the exporters of the grain so inspected. All matters relating to the employment of trade inspectors (including those concerning health and safety) shall remain the responsibility of trade inspectors and those organisations within the grain trade by whom they are employed and the Agricultural Departments shall not be liable in respect of any loss, damage, injury or death arising as a result of any act or omission, whether negligent or otherwise, of a trade inspector. It is the responsibility of the trade to ensure that sufficient resources and appropriate facilities and equipment are provided; and that the application of any chemical treatment is carried out in accordance with current pesticide legislation and importers' requirements.

5. No liability shall attach to the Agricultural Departments in respect of any loss or damage arising as a result of the issue or contents of any certificate or any delay in granting or failure to grant a certificate or non-delivery, delayed delivery or mis-delivery of any documents, whether negligent or otherwise. No guarantee is given by the Agricultural Departments that any certificates granted will comply with or meet the requirements of any other country or importer.

## Application procedures

6. The Agricultural Departments may on plant health grounds refuse any application for the issue of a phytosanitary certificate. A certificate will not be issued if the Agricultural Department has reason to believe that any information supplied by the applicant or a trade inspector is incorrect or inaccurate or that any conditions prescribed relating to the treatment or movement of material intended for export have not been met. The Agricultural Department may also require an exporter to produce any relevant information in connection with any grain for export.

7. Exporters requiring phytosanitary certificates for consignments of grain for export should in the first instance, either themselves or through a representative, notify Fera PHSI or their local SGRPID Agricultural Officer of the intended export by submitting, preferably by fax, a copy of application form HH 93 with Sections I and II completed as soon as possible and **at least five clear working days before the proposed date of loading to ship**. Addresses, together with telephone and fax numbers of SGRPID Agricultural Officers are given in Annex V. Exporters must also ensure that the cargo superintendents and silo operators employed to handle their grain at the ports are notified as soon as possible of the need for sampling and inspection of their grain by trade inspectors under these arrangements.
8. In some circumstances, depending on the requirements of the importing country, it may be necessary for samples to be examined by an official laboratory. The laboratories to be used are as follows:

#### England and Wales

- **Fera Laboratory, York**  
for examinations to detect the presence of particular seed borne pests and diseases;
- **Official Seed Testing Station (OSTS) Cambridge**  
for examinations to confirm freedom from prohibited weed seeds and parasitic plants.

#### Scotland

- **The Scottish Agricultural Science Agency (SASA)**  
for all testing in Scotland.

The full addresses and contact numbers are given at Annex V.

Annex I contains information on the countries which according to present information require such additional examinations. In some cases examinations by the official laboratories may also be necessary to meet import permit requirements.

9. Following sampling and examination of consignments for grain pest insects by trade inspectors and, where relevant, the dispatch of samples to the appropriate laboratory, an application should be made to Fera PHSI or the local SGRPID Agricultural Officer for the issue of an official phytosanitary certificate by

sending, preferably by fax, a further copy of the HH93 submitted earlier, but with Section III also completed. A phytosanitary certificate can only be issued following a satisfactory report from a trade inspector and, where appropriate, from the official laboratory.

10. Fera PHSI or SGRPID Agricultural Officers must be informed of any special conditions of entry, e.g. any import permit requirements, relating to the examination and certification of the consignment. Where an import permit has been issued by the relevant authorities in the country to which grain is being exported a copy should be forwarded to Fera PHSI or the local SGRPID Agricultural Officer with the application form.

#### Sampling and inspection procedures

11. Sampling and examination of grain arriving at the docks will be undertaken by trade inspectors, who will normally be employees of cargo superintendents or silo operators.
12. Reliance will be placed on judgement exercised by trade inspectors who must take into account all relevant factors relating to the quality and condition of grain on a case-by-case basis. Their reports will be largely responsible for determining whether a phytosanitary certificate conforming to the requirements of the International Plant Protection Convention (IPPC) can be issued by the Agricultural Department - in particular whether the following statement in Section 10 of the phytosanitary certificate can be made:

'This is to certify that the plants or plant products described above:

- have been inspected according to appropriate procedures; and
- are considered to be free from quarantine pests, and practically free from other injurious pests; and that they
- are considered to conform with the current phytosanitary regulations of the importing country'.

13. Details of the grain insect pests for which inspections must be undertaken for all countries requiring phytosanitary certification are given at Annex II. Additional requirements of particular countries are also given at Annex II. It should be emphasised that the details given in Annex II reflect the Agricultural Departments understanding of importing countries' requirements at the date of this leaflet. It is impossible to guarantee that these will be up to date at all times.

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14. Where necessary, exporters should send a representative sample of not less than 1kg to the Fera Laboratory and/or OSTs in respect of exports from England and Wales and SASA in respect of exports from Scotland with a completed copy of the application form HH93 see Annex III. Addresses of the laboratories are given at Annex V. Any exporter who is in doubt about the need for such additional inspections should seek guidance, without delay, from Fera PHSI or their local SGRPID Agricultural Officer.
  15. Phytosanitary certificates can also be issued for a number of small analytical samples provided the bulk is sampled by trade inspectors as described above. Where required representative samples from the bulk should be sent to the Fera Laboratory and/or OSTs or SASA for examination for freedom from prohibited weed seeds, parasitic plants and fungal diseases. Once a satisfactory report is received by Fera PHSI or SGRPID Agriculture Officer from the trade inspector and, where appropriate, from the official laboratory, phytosanitary certificates will be issued for each individual sample as required.
  16. It is essential that trade inspectors keep a record of grain inspected, including the date of inspection and any pests found so that appropriate treatment or other measures can be taken.

#### **Sampling and inspection whilst loading from lorry to store/silo or to ship**

17. The sampling of lorries and inspection of grain for insect pests will be undertaken as follows. Samples will be drawn from all lorries before grain is unloaded to silos/stores or direct to ships. At least 3kg of grain must be collected from each lorry, sieved and examined for infestation. Grain must be collected from at least 3 dispersed points and from different depths, unless an automatic core sampler is being used to provide a single sample of 3kg.
18. Detection and identification of low levels of infestation in samples of grain can only be performed successfully under suitable working conditions and using the appropriate equipment. Samples should be examined in a well lit, suitably warm area near to the sampling point.
19. Insects should be separated from grain using a sieve with a 2.0 to 2.5mm screen/mesh. Sieves should not be overloaded and should be well shaken to dislodge any insect pests. The sievings may be examined directly in the receiver or can be tipped onto a white tray and examined carefully in good light. In cold conditions the detection of live

pests will be easier if the tray is gently warmed. A x10 lens should be used for the identification of insects.

20. If, on inspection, no grain pest insects are found the load can be discharged direct to ship or into storage in a silo or store.
21. If live grain pest insects are found the load should be rejected or placed in separate storage at the docks pending fumigation or other appropriate treatment, e.g. chemical treatment. Such grain, for which a phytosanitary certificate is required, should not be loaded onto a vessel without fumigation or other treatment undertaken by a professional fumigation/treatment company in accordance with the procedures agreed between GAFTA and the Agricultural Departments - see paragraphs 34 and 35 and Annex IV.
22. If dead, but no live, grain pest insects are found the sampling and inspection procedure outlined at paragraphs 17-19 above should be repeated.
23. Provided no live grain pest insects are found in this further examination the load can be considered uninfested and discharged direct to ship or to silo/store.
24. In the case of mites, where appropriate, trade inspectors will exercise judgement based on a range of relevant factors, e.g. moisture content and smell.

#### **Sampling and inspection whilst loading from silo/store to ship**

25. In cases where, at trade discretion, grain is not inspected before loading to silo/store the issue of a phytosanitary certificate will only be considered following subsequent sampling and inspection while loading from silo to ship.
26. For sampling and inspection of grain ex-silo at least 4kg of grain must be collected from the stream every 10 minutes. The sample taken should be as representative of the whole grain flow as possible in the individual circumstances and sampling solely at the edge of a flow should be avoided. Samples should be examined in a well lit, suitably warm area near to the sampling point.
27. Collection of grain from moving equipment can be hazardous. It is important to emphasise, therefore, that it is for the trade to ensure that suitable, safe arrangements are made for the collection of grain; and it is for trade inspectors and their employers to ensure compliance with all relevant health and safety legislation.

28. Insects should be separated from grain and the sample examined as described in paragraph 19.
29. If, on inspection, no grain pest insects are found the load will be considered free from infestation.
30. If live grain pest insects are found a phytosanitary certificate will only be issued if appropriate residual treatment or fumigation has been undertaken by a professional treatment company.
31. In the case of mites, where appropriate, trade inspectors will exercise judgement based on a range of relevant factors, e.g. moisture content and smell.
32. Where during loading, in order to bulk up cargoes, non-inspected grain is added to grain already inspected both the non-inspected and inspected grain should be inspected ex-silo/store except where grain previously inspected can be clearly identified.
33. When it is necessary to inspect grain in bulk (for example in a store) a sample of approximately 2kg of grain should be taken for every 20 tonnes for lots of less than 100 tonnes. For lots exceeding 100 tonnes 1kg of grain should be taken for every 20 tonnes. It is important that samples are taken at various depths throughout the bulk. For safety reasons samples should not be taken from a silo.

### **Disinfestation by chemicals: residual insecticide treatment and fumigation**

34. Details of any treatment applied, including, where appropriate, details of fumigation, should be entered in the appropriate section of the application form. These details will be included on the phytosanitary certificate. A copy of the certificate issued by the treatment/fumigation company should be included with the application form sent to the local Fera PHSI or SGRPID Agricultural Officer.
35. Guidelines on the treatment processes which would be expected to achieve effective disinfestation of grain are given at Annex IV. A copy of the certificate to be completed by the treatment/fumigation company is also at Annex IV.

### **Charges**

36. Fees will be charged for the certification of consignments. Details of the fees in England are given in a separate explanatory leaflet (PHE 1). Copies are available on the Fera website at: [www.defra.gov.uk/fera/plants/forms/plantHealthForms.cfm](http://www.defra.gov.uk/fera/plants/forms/plantHealthForms.cfm) or from the local Fera PHSI Office. Details of all our offices are available on the Fera website at: [www.defra.gov.uk/fera/contactUs/contactPIh.cfm](http://www.defra.gov.uk/fera/contactUs/contactPIh.cfm). Details of fees in

Scotland can be obtained from your local SGRPID office.

37. Where it is necessary for a sample to be examined by the OSTs, a separate charge will be made by the OSTs for this service.

### **Food aid cargoes**

38. A phytosanitary certificate is required for all grain cargoes exported under the Food Aid Programme. Fees may be charged for the certification of consignments.

### **What if you are dissatisfied with our service?**

39. If you have any concerns or specific complaints about the way Fera operates or the services we provide, please refer to Fera's Customer Charter for details of our complaints procedure. The Customer Charter is available on the Fera website at: [www.defra.gov.uk/fera/news](http://www.defra.gov.uk/fera/news).
40. Different arrangements apply in Scotland and information may be obtained from SGRPID at the address on the front cover of this leaflet.

### **41. Data Protection**

Information provided will be used for the processing of your application. Details will be held in our computer system and will be used to compile statistics on activity in your sector for submission to the EC Commission and for administrative purposes. In emergency situations, such as a pest outbreak, information (including the location of licenced material) may be used by Fera, Defra and other Government Departments or their appointed agents.

Fera may be required to release information, including personal data and commercial information, on request under the Environmental Information Regulations, the Code of Practice on Access to Government Information or the Freedom of Information Act 2000. However, Fera will not permit any unwarranted breach of confidentiality nor will we act in contravention of our obligations under the Data Protection Act 1998.

Fera or its appointed agents may use the name, address and other details on your application form to contact you in connection with occasional customer research aimed at improving the services that Fera provides to you.

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# ANNEX I

## **Countries requiring phytosanitary certificates for grain imports**

1. The following countries require a phytosanitary certificate for all shipments of grain. Certificates are issued by Agricultural Departments following sampling and inspection by authorised trade inspectors for grain pest insect infestation. According to present information the countries listed below require that consignments are free from grain pest insects.
2. Where specified below, an examination of a representative sample by the Fera Laboratory or by the Official Seed Testing Station is also believed to be required to meet the importing country's requirements. For exports from Scotland all testing is undertaken by the Scottish Agricultural Science Agency (SASA). In such cases, phytosanitary certificates can only be issued following a satisfactory report from an authorised trade inspector and from the appropriate testing laboratory. Further information on the countries which, according to present information, require examinations for prohibited weeds, parasitic plants or fungal diseases is given at Annex III.
3. The information below is taken from the 'Summaries of Overseas Countries Plant Health Import Regulations (SOCPHIR)' and other sources. While every effort is made to ensure that information on importing countries' plant health regulations contained in the Summaries is accurate, they are not a definitive statement of the law. Moreover, additional requirements may be specified by importing countries from time to time, for example by import permit. Details of those countries which the Agricultural Departments believe require import permits for entry of grain are given at Annex II.

## ANNEX I (continued)

Afghanistan		Macedonia	
Albania	– <b>OSTS/SASA examination</b>	Malawi	
	– <b>CSL/SASA examination</b>	Mauritania	
	for <i>Tilletia caries</i>	Mexico	
Algeria	– <b>OSTS/SASA examination</b>	Moldova	– <b>OSTS/SASA examination</b>
Australia	– <b>OSTS/SASA examination</b>	Montenegro	
	– <b>CSL/SASA examination</b>	Morocco	
	(for <i>cephalaspodium (hymenula cerealis) stripe fungus</i> )	Muscat and Oman	
Bangladesh		Nigeria	
Belarus		Pakistan	
Bolivia	– <b>OSTS/SASA examination</b>	Panama	
	– <b>CSL/SASA examination</b>	Peru	
	for <i>Tilletia caries</i>	Philippines	
Bosnia		Russia	– <b>OSTS/SASA examination</b>
Burundi		Rwanda	
Canada		Saudi Arabia	
Canary Islands		Serbia	
Chile		South Africa	
China	– <b>OSTS/SASA examination</b>	South Korea	
Colombia		Sri Lanka	– wheat only
Croatia		Sudan*	– <b>CSL/SASA examination</b>
Cuba <sup>†</sup>		Syria	
Egypt		Taiwan	
Eritrea		Tanzania	
Ethiopia		Togo	
Georgia		Tunisia	
Haiti		Turkey	
India		Ukraine	– <b>OSTS/SASA examination</b>
Iran		Uruguay	– <b>OSTS/SASA examination</b>
Israel			– <b>CSL/SASA examination</b>
Jamaica			for <i>Anguina agrostis</i> and <i>Anguina tritica</i>
Jordan	– <b>OSTS/SASA examination</b>	Uganda	
Kenya		UAE	
Korea		Bosnia, Serbia,	
Kyrgyzstan <sup>∅</sup>		Montenegro	– <b>OSTS/SASA examination</b>
Lebanon		Vietnam	– <b>OSTS/SASA examination</b>
Libya			

† See Annex II

∅ Additional Declaration : Free from *Tilletia Indica* and *Trogederma Granarium*

\* Importing countries regulations indicate that an examination by Fera Laboratory/SASA is required but are not specific as to the pests and diseases of particular concern.

## ANNEX II

### Grain insect pests for which inspections must be undertaken for all countries requiring phytosanitary certificates

#### Beetles

<i>Ahasverus advena</i>	Foreign grain beetle
<i>Cryptolestes spp</i>	Flat grain beetles
<i>Oryzaephilus spp</i>	Saw toothed/ merchant grain beetles
<i>Rhyzopertha dominica</i>	Lesser grain borer
<i>Sitophilus granarius</i>	Grain weevil
<i>Sitophilus oryzae/ zeamais</i>	Rice/Maize weevil
<i>Tribolium spp</i>	Flour beetles
<i>Trogoderma spp</i>	e.g. Khapra beetles

#### Moths

Stored product moths (e.g. *Ephestia spp.*, *Hofmannophila pseudospretella*, *Plodia interpunctella* and *Sitotroga cerealella*) are difficult to identify. Adult moths are unlikely to be found alive in grain. On the very rare occasions when moth larvae are found, they need to be considered further only if the cargo is destined for Bulgaria or Syria (which specifies *Ephestia spp.*, *Pyralidae spp.* and *Sitotroga cerealella* as quarantine pests). Specialist advice is available from the Central Science Laboratory in England and Wales or the Scottish Agricultural Science Agency in Scotland.

#### Additional requirements specified by importing countries

1. **Import permits** are required for exports to the following countries:

Australia	Malawi
Belarus	Mexico
Canada	Moldova
Chile	Nigeria
China	Pakistan
Russia	Iran
Syria	Jordan
Tanzania	Kenya
Turkey	Kyrgyzstan
Ukraine	South Africa
Uganda	Seychelles

If exporters have more up to date information or if other countries demand import permits Fera PHSI or the local SGRPID Agricultural Officer should be advised as soon as possible.

2. **Other requirements** specified by importing countries:

Cuba – consignments must be free from:

- *Trogoderma granarium* Everst
- *Trogoderma* SSP.
- *Tenebrio molitor* L.
- *Tenebrio obscurus* F.
- *Tribolium madens* Charp
- *Tribolium destructor* Hyten
- *Tribolium audax*
- *Ptinus fur* L.
- *Pitinus velliger* F.
- *Niptus hololeucus* Falderm
- *Porthetria dispar* L.
- *Ephestia kuehniella* Zall
- *Pyralis farinalis* L.

Vietnam – consignments must be free from:

- *Caulophilus Latinus*.

3. **Additional declarations**

Occasionally some countries ask for declarations to be made on phytosanitary certificates regarding freedom from pests and diseases for which inspections are not normally undertaken. In cases where such pests are not known to occur in Great Britain a declaration on those lines may be provided.

Hungary – consignments must be free from:

- *Acarus siro*

Disinfestation of consignments destined for Hungary may be required in order to ensure freedom from this mite. Specialist advice is available from the Fera Laboratory or the Scottish Agricultural Science Agency.

Vietnam – consignments must be free from:

- *Tilletia indica* (karnal bunt)

## ANNEX III

### Countries requiring examination of representative samples for freedom from prohibited weed seeds and/or parasitic plants and fungal diseases

1. In the case of the countries indicated below, examination of a representative sample (approximately 1 kg) by the OSTs for exports from England and Wales or SASA for exports from Scotland, is believed to be required to meet the importing country's requirements for freedom from certain prohibited weed seeds, parasitic plants and fungal diseases. In such cases, phytosanitary certificates can only be issued following a satisfactory report from an authorised trade inspector **and** from the OSTs/SASA and, where appropriate the Fera Laboratory/SASA (see Annex I). Where a test for **Orobanche** is required, a **further** 1 kg sample should be sent to OSTs or SASA. This sample should be sent in paper bags sealed inside plastic bags.
2. Identification of the relevant weed seeds, parasitic plants or fungal diseases listed below in a consignment would probably mean that a phytosanitary certificate could not be issued. However, Agricultural Departments believe that only those species in **bold italics** are likely to be relevant in terms of UK grain exports.
3. The information below is taken from the 'Summaries of Overseas Plant Health Import Regulations (SOCPHIR)' and other sources. While every effort is made to ensure that information on importing countries' plant health regulations contained in the Summaries is accurate, they are not a definitive statement of law. Moreover, additional requirements may be specified by importing countries from time to time, for example by import permit. Details of those countries which Agricultural Departments believe require import permits for entry of grain are given at Annex II.

Albania	<i>Cuscuta spp.</i> <i>Orobanche spp.</i>	<i>Ustilago nuda</i>
Algeria	<i>Arceuthobium spp.</i> <i>Cuscuta spp.</i>	<i>Orobanche spp.</i>
Afghanistan	<i>Ustilago nuda</i>	
Australia	<b>Admixture test only</b> <b>–Must be less than 1%</b>	
Bolivia	<i>Ustilago nuda</i>	
China	<i>Cuscuta spp.</i> <i>Orobanche spp.</i>	<i>Sorghum halepense (L) pers.</i>
Jordan	<i>Ustilago nuda</i> <i>Claviceps purpurea</i>	
Moldova	<i>Acroptilon repens</i> <b><i>Ambrosia artemisiifolia</i></b> <i>Ambrosia psilostachya</i> <i>Ambrosia trifida</i> <b><i>Cenchrus incertus</i></b> <b><i>Cuscuta spp.</i></b> <i>Euphorbia dentata</i> <i>Euphorbia marginata</i>	<b><i>Helianthus californicus</i></b> <b><i>Helianthus ciliaris</i></b> <i>Iva axillaris</i> <i>Solanum carolinense</i> <i>Solanum elaeagnifolium</i> <b><i>Solanum rostratum</i></b> <b><i>Solanum triflorum</i></b>
Russia	<i>Acroptilon repens</i> <b><i>Ambrosia artemisiifolia</i></b> <i>Ambrosia psilostachya</i> <i>Ambrosia trifida</i> <i>Anoda cristata</i> <b><i>Bidens pilosa</i></b> <b><i>Cenchrus incertus</i></b> <b><i>Cuscuta spp.</i></b> <i>Euphorbia dentata</i> <b><i>Helianthus californicus</i></b> <b><i>Helianthus ciliaris</i></b>	<i>Ipomoea hederacea</i> <i>Ipomoea lacunosa</i> <i>Oenothera laciniata</i> <i>Polygonum pensylvanicum</i> <i>Sicyos angulatos</i> <i>Sida spinosa</i> <i>Solanum carolinense</i> <i>Solanum elaeagnifolium</i> <b><i>Solanum rostratum</i></b> <b><i>Solanum triflorum</i></b>

## ANNEX III (continued)

<b>Ukraine</b>	<i>Acanthospermum hispidum</i> <i>Acroptilon repens</i> <i>Ambrosia psilostachya</i> <b><i>Ambrosia artemisiifolia</i></b> <i>Ambrosia trifida</i> <i>Artemisia biennis</i> <i>Cassia occidentalis</i> <i>Cassia tora</i> <b><i>Cenchrus spp.</i></b> <b><i>Cuscuta campestris</i></b>	<i>Emex spinoza</i> <i>Emex australis</i> <b><i>Helianthus spp.</i></b> <i>Ipomoea hederacea</i> <i>Paspalum spp.</i> <i>Physalis angulata</i> <i>Solanum carolinense</i> <i>Solanum elaeagnifolium</i> <b><i>Solanum rostratum</i></b> <b><i>Solanum triflorum</i></b>
<b>Uruguay</b>	<i>Cirsium arvense</i> <i>Euphorbia Agula</i>	
<b>Vietnam</b>	<i>Orobancha spp</i> <i>Cuscuta spp</i> <i>Lolium temulentum</i> <i>Cirsium arvense</i>	
<b>Bosnia, Serbia, Montenegro</b>	<i>Acroptilon repens</i> <b><i>Ambrosia artemisiifolia</i></b> <i>Ambrosia psilostachya</i> <i>Ambrosia trifida</i> <i>Arceuthobium spp. (non-European)</i> <i>Asclepias syriaca</i>	<b><i>Cuscuta spp.</i></b> <i>Galinsoga ciliata</i> <i>Iva xanthlifolia</i> <b><i>Orobancha spp.</i></b> <b><i>Solanum rostratum</i></b> <b><i>Solanum triflorum</i></b>

# ANNEX IV

## Disinfestation by chemical: residual insecticide treatment and fumigation

1. This annex describes the processes which, if applied rigorously by professional treatment companies, would be expected to achieve effective disinfestation of grain for export. Subject to the continued approval of the substances in question for the purposes described, Fera PHSI or SGRPID Agricultural Officers will as a general rule accept certificates of treatment in the attached form completed by professional treatment companies as evidence that such treatments have been undertaken and are expected to be effective under the particular circumstances.
2. It remains the responsibility of treatment companies to ensure that the substances they use continue to be permitted for the purposes under the Control of Pesticides legislation and that all other relevant legislation, including health and safety measures, are observed. The pesticide product label must be consulted and all applications must be made in accordance with the statutory conditions of approval of the pesticide. It remains the responsibility of the grain export trade to ensure that any treatments meet the requirements of importing countries.

### Residual insecticide treatment

3. The temperature of the grain during loading and length of time between loading and discharge will have an effect on the efficacy of the treatment applied. Correct application of pirimiphos-methyl, chlorpyrifos-methyl, etrimfos, or other UK approved pesticides undertaken by professional treatment companies within the conditions of approval and taking into account the following temperature and time provisions will normally be accepted for the purposes of phytosanitary certification of the grain.

Grain temperature	Length of time between treatment of infested grain and discharge
10° C and above	5 days or more
7.5° C to less than 10° C	8 days or more
5° C to less than 7.5° C	10 days or more

At less than 5° C treatment will be effective in certain specific situations. For guidance refer to the Fera Laboratory or the Scottish Agricultural Science Agency.

### Fumigation

4. Fumigation with phosphine in ships' holds undertaken rigorously by professional treatment companies within the conditions of approval and taking into account, as appropriate, the following data, will normally be accepted for the purposes of phytosanitary certification of the grain. For fumigation other than in ships' holds advice should be sought from the Fera Laboratory or the Scottish Agricultural Science Agency.
  - **Probe system:** aluminium phosphide probed into the cargo to a minimum depth of 1.5 metres, either by means of tablet/pellet directly into the cargo; or with the aluminium phosphide contained within retrievable sleeves, packages or sachets..
  - **Re-circulation system:** powered fan linked to fumigation ducts at the bottom of each hold. Re-circulation of the fumigant, which may be placed on or near the surface or probed into the cargo, is then carried out continuously.
  - **Fumigant:** aluminium phosphide (AIP) or Magnesium phosphide (MgP), based on products currently approved for use in the UK.

Note: it is **not** acceptable to bury the aluminium phosphide on or near the surface of the cargo, it must be probed in as set out above.

## ANNEX IV (continued)

	Temperature	Time (days) <sup>1</sup>	Fumigant	Rate <sup>2</sup>
<b>Probe system</b>	10° C and above	12 or more <sup>3</sup>	AIP	2g
	15° C and above	10 or more	AIP	2g
	20° C and above	7 or more	AIP	2g
	20° C and above	5 or 6	AIP	4g
	Less than 10° C	Ineffective		
<b>Re-circulation system</b>	5° C and above	12 or more <sup>4</sup>	MgP	1.5g
	10° C and above	10 or more	MgP/AIP	1.5g
	15° C and above	8 or more	MgP/AIP	1.5g
	20° C and above	5 or more	MgP/AIP	1.5g
	Less than 5° C	Refer to CSL		

**Note:** the probe and re-circulation methods shown above are the only methods acceptable for the purposes of phytosanitary certification. Other methods are not acceptable as they will not achieve effective disinfestation.

- <sup>1</sup> **Time** is the length of time between treatment of infested grain and discharge.
- <sup>2</sup> Amount of phosphine required per m<sup>3</sup> of hold volume.  
**NB:** Phosphine generating formulations release 1g of PH<sub>3</sub> per 3g of formulated product.
- <sup>3</sup> 16 days or more if *Sitophilus* species present.
- <sup>4</sup> 21 days or more if *Sitophilus* species present.

### Review of procedures, substances etc.

5. The guidelines above will be reviewed periodically. It is important to emphasise, however, the information contained in this annex must not be taken as a definitive statement of Pesticides legislation. It is for those companies which undertake chemical treatments or fumigation to ensure that they comply fully with all relevant pesticide legislation, including the Food and Environment Protection Act 1985, the Control of Pesticides Regulations 1986 as amended by the Control of Pesticides (Amendment) Regulations 1997, the Plant Protection Products Regulations 1995 as amended and the Plant Protection Products (Basic Conditions) Regulations 1997. There may also be Health and Safety requirements including, where appropriate, the requirements of the UK Merchant Shipping (Carriage and Cargoes) Regulations 1997 as they relate to the use of pesticides in ships.

Companies should also note that pesticide approvals, once granted, are themselves subject to review and change.

If in doubt companies should seek guidance from: the **Health and Safety Executive – Chemicals Regulation Directorate – Pesticides**, Mallard House, Kings Pool, 3 Peasholme Green, York YO1 7PX.

Telephone Information Services on – **(01904) 455775**

E-mail – [pesticides@hse.gsi.gov.uk](mailto:pesticides@hse.gsi.gov.uk) for plant protection products (generally agricultural pesticides)

or,

the **Health and Safety Executive**, Biocides and Pesticides Assessment Unit, Magdelene House, Stanley Precinct, Bootle, Merseyside L20 2QZ.

Telephone – **(01519) 513219**

E-mail – [biocides@hse.gsi.gov.uk](mailto:biocides@hse.gsi.gov.uk) for biocidal products (generally non-agricultural pesticides).

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## ANNEX V

### Scotland

For addresses of Scottish Government Rural Payments and Inspections Directorate area offices see the Scottish Government website at:  
[www.scotland.gov.uk/Topics/Agriculture/AOcontacts](http://www.scotland.gov.uk/Topics/Agriculture/AOcontacts)

#### Address of Official Testing Laboratories

- **The Fera Laboratory**  
Phytosanitary and Export Testing Lab (PETL)  
Sand Hutton  
York YO41 1LZ  
Tel: (01904) 462000  
Fax: (01904) 462111
- **The Official Seed Testing Station**  
NIAB  
Huntingdon Road  
Cambridge CB3 0LF  
Tel: (01223) 342200  
Fax: (01223) 342244
- **The Scottish Agricultural Science Agency**  
1 Roddinglaw Road  
Edinburgh EH12 9FJ  
Tel: (0131) 2448900  
Fax: (0131) 2448971  
E-Mail: [info@sasa.gsi.gov.uk](mailto:info@sasa.gsi.gov.uk)