REPORT

Rome,
Italy,
21-25 May
2001

Interim Standards Committee

Third meeting

Meeting Report
AGP/2001

REPORT OF THE THIRD MEETING OF THE INTERIM STANDARDS COMMITTEE

Rome, Italy: 21 - 25 May 2001

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2001

TABLE OF CONTENTS

1. OPENING OF THE MEETING

The meeting was opened by Mr Canale, Chairperson of the Interim Commission on Phytosanitary Measures (ICPM). He emphasized the important role that the Interim Standards Committee (ISC) plays in advancing the work programme of the ICPM and he commended the Committee for the very significant work that it has accomplished. He noted that thirteen standards adopted under the IPPC to date have been in large part due to the diligence and cooperation of Committee members. Mr Canale recalled that the ISC was to be replaced by the Standards Committee with a new composition and terms of reference. He expressed his gratitude to the ISC for its hard work and technical excellence as a model for the new committee.

Mr Vereecke was invited to chair the meeting and agreed. Mr Escheygoyan (OIRSA) was welcomed as a new member of the Committee.

Mr Griffin, Coordinator for the IPPC Secretariat, outlined the programme for the meeting based on the provisional agenda. He recalled that documents provided to the meeting were to be approved for distribution to ICPM Members for consultation. It was noted that the documents represented those draft standards considered to be highest priority and those in the most advanced stage of development. He explained that the Secretariat was planning a second meeting of the ISC in November 2001 that would be devoted to examining draft standards for submission to ICPM-4 for adoption. He noted that this would include the standard on Pest listing which was outstanding from 2000 and also standards that were returned with comments from the consultation process in 2001.

The ISC was informed that Mr Roddy Burgess (member of the working group for wood packing material) was invited by the Secretariat as an expert to assist with discussions on the draft standard for wood packing. It was noted that this draft standard had some areas requiring further work, but it was the opinion of the working group that the standard needed to move forward for broader review and inputs as urgently as possible. The working group hoped the ISC would be able to approve the draft standard for distribution to countries for consultation. In the event that the draft was referred back to the working group, they expressed the need to have explicit guidance from the ISC regarding future work.

The agenda was adopted based on the programme suggested by the Secretariat, including changes to the order for considering draft standards and the addition of Amendments to the Glossary of phytosanitary terms as an agenda item. (Annex II)

2. REPORT OF THE SECOND MEETING OF THE ISC (NOVEMBER 2000)

The report of the Second Meeting of the ISC was briefly introduced by the Coordinator who pointed out that endnotes had been added to indicate the responses by the FAO Legal Office to specific questions that arose during the meeting. The report was adopted by the ISC without modification.

3. AMENDMENTS TO THE GLOSSARY OF PHYTOSANITARY TERMS

The ISC considered the report and recommendations of the Glossary Working Group (March 2001 - Paris, France) beginning with terms that had been referred to the Glossary Group by the ISC.

The recommendations of the Glossary Group for the definition of *plants in vitro*, *re-exported consignment*, and *country of origin* were accepted without change and the Committee expressed its preference for using the term *issue* in ISPMs instead of *issuance* as used in the IPPC. The ISC decided to delete the term *growing season* and replace it with *growing period*, and add *(of a crop)* to clarify the intent. A new definition for *country of re-export* was agreed upon and the definition of *consignment in transit* was modified. The ISC noted that the adoption of these changes would effect existing standards where previous terms/definitions were used.

A proposed definition for *phytosanitary measure* was agreed for distribution to countries for consultation, but it was noted that the word "unacceptable" before *economic impact* gave the term a different meaning. Concern was also expressed about the need to clearly understand the relationship of the new definition to the definition adopted in the New Revised Text of the IPPC. The ISC expressed its desire to first have comments from countries on the new definition before deciding on the need to develop explanatory text.

In discussions on terms associated with draft standards, the Committee agreed with the recommendations of the Glossary Group to avoid referring to acronyms in Glossary and in the title of the definition section in ISPMs. Following this, the ISC also agreed to modify relevant definitions so they did not refer to acronym or abbreviation but simply stated what the acronym or abbreviation represented.

Definitions proposed for *bark free wood*, *dunnage*, and *wood packing material* were accepted. The definition for *heat treatment* was modified to read "*the process in which a commodity is heated until it reaches a minimum temperature for a minimum period of time according to an officially recognized specification*". The Committee agreed that no changes were required in the existing definition of *treatment*.

The definition of *systems approach* was modified significantly and included the replacement of *procedures* with *measures* for increased consistency. There was general agreement on the new term/definition *intended use*.

The ISC considered the recommendations of the Glossary Group regarding issues raised by FAO's translation service on French terms. It was noted that many of the translation issues arose due to the translators using out-of-date reference material. However, the Committee agreed with the French text proposed for the definition of *analyse* and *pays de réexportation*. The ISC requested clarification from the FAO Legal Office on the correct French translation and proper use of the French terms for *requirement* as the New Revised Text of the IPPC differs from the SPS Agreement on this point. [1]

The Glossary Group had also noted for the ISC that there is an inconsistency in the translation of *emergency action* as the French and Spanish versions of the IPPC use the equivalent of the English term *measures*. However, it was agreed that the distinction between *actions* and *measures* was useful to maintain in definitions and ISPMs since actions may not be measures

[1] The Glossary Working Group declared its preference for *exigence* as the French translation of *requirement*, in preference to *disposition* (as in the heading of Article VII of the IPPC) or *prescription* (as in the SPS Agreement). Concerns were raised by the ISC about any possible legal implications of these differences. The FAO Legal Office recommended that ISPMs use exactly the same French term as the Convention (*disposition*), although the Legal Office agrees that *exigence* is a more appropriate term as the English equivalent. They indicated that the use of *prescription* in the SPS Agreement is not a legal concern for the IPPC.

but would certainly be procedures and fit under the scope of phytosanitary measures as described in the SPS Agreement.

The ISC agreed on the need for revision of ISPM No. 1 and recommended the establishment of a working group for this purpose. (see Annex VII for the agreed specification for the review of ISPM No. 1). In particular, it was pointed out that the IPPC interpretation of *non-discrimination* in ISPM No. 1 incorporates both the principle of non-discrimination and also the principle of national treatment from the SPS Agreement. The ISC decided that this issue should be considered in the revision of ISPM No. 1, noting that it had further implications in the context of official control. The Committee also noted that the current Glossary term/definition for *region* will unnecessarily limit future consideration of regionalization as a principle in ISPM No. 1. It was therefore agreed to delete the term in anticipation of the revision of ISPM No. 1.

Revisions to the Glossary of phytosanitary terms were approved by the ISC for distribution to countries for consultation (Annex II).

4. REGULATED NON-QUARANTINE PESTS: CONCEPT AND APPLICATIONS

The Coordinator recalled that this draft ISPM has been identified as a high priority by the ICPM. The Committee indicated general agreement on the acceptability of the standard. However, editorial modifications were made throughout the document. Significant modifications included a title change to *Regulated Non-Quarantine Pests: concepts and applications*. Under the reference section, it was considered necessary to add the Glossary supplement on *official control* recently adopted by the ICPM (also included in other draft ISPMs). It was also agreed that the definition of RNQP would be singular but the plural would include the addition of an ‘s’, i.e. RNQPs.

There was consensus that the phrase "which may be zero" would not be added after *specific level* under the heading *Purpose*, as this implies "zero tolerance" when in fact "freedom from" is intended. However, it was agreed that the concept of a tolerance level would be introduced in the text where appropriate. The Committee noted the need to differentiate between quarantine pests and RNQPs, and the associated use of the terms *potential economic importance* and *economic impact*, respectively. They also emphasized that a pest needs to be present in a country before it can be classified as an RNQP. The ISC highlighted the need to discourage the use of the term *quality pest* as an expression of phytosanitary status and adjusted the text accordingly.

The ISC clarified that the interpretation of "those plants" (and their products) included all plants for the initial intended use of the importation of "those plants", i.e. the complete production cycle of the imported plants. The meeting also agreed that the "future use of those plants" included future generations of the plants for multiplication, but noted that in other parts of the document "those plants " referred specifically to the same generation of plants.

The Committee agreed that primary losses specifically referred to "those (imported) plants", whereas secondary losses referred to spread to "other plants". As a result, reference to secondary losses was deleted.

The ISC suggested the creation of a footnote to indicate that certification schemes are not related to phytosanitary certification. In addition, text was added to clarify that a zero tolerance may be specified in exceptional instances if technically justified.

The modified standard was approved by the ISC for distribution to countries for consultation (Annex III).

5. GUIDELINES FOR REGULATING WOOD PACKING MATERIAL USED IN THE TRANSPORT OF COMMODITIES

The Chairperson introduced the draft document by emphasizing the importance of the standard and the substantial effort that had been put into its drafting. Mr Burgess was introduced and provided on overview of the subject and background on the draft standard.

Mr Burgess noted in particular:

- the urgency and priority countries assigned to this draft ISPM;
- products shipped with wood packaging material are frequently not subject to phytosanitary control;
- in practice, a significant amount of bark is often associated with such wood packaging material; and
- work is on-going with respect to gathering additional specific scientific information on the efficacy of measures for wood packing.

The ISC agreed with the need and urgency for such an ISPM and expressed general support for distribution of the draft to governments for consultation. However, it was noted by certain members of the Committee that the draft standard had significant weaknesses with regard to the lack of efficacy data and the standard was handicapped by the lack of an agreed systematic process for evaluating and recommending measures.

Mr Hedley did not support approving the draft for distribution to countries for consultation based on the current structure and content. He expressed strong dissatisfaction with the lack of a systematic evaluation procedure within the IPPC and indicated that he thought it was premature to release the draft for country consultation. The ISC also noted that as heat treatment is a phytosanitary measure, the adoption of heat treatment as a measure in the ISPM should be based on a pest risk analysis that had not been done. After significant deliberation, the ISC noted that the document may require significant revision based on comments from governments and taking into account the objections raised by Mr Hedley. It also noted that an ICPM process for the evaluation of measures as suggested by Mr Hedley was anticipated and the experience gained with the wood packing standard may prove valuable for this purpose.

The ISC noted the underlying factor in heat treatment is the importance of a permanent physical change to the wood that would prevent re-infestation of the raw wood pests. In this regard, humidity was not an important factor as the heat determined the change in state of the wood. For this reason, any treatment (e.g. certain types of chemical impregnation treatments) that met the required criteria for heat treatment would be deemed acceptable.

Changes in the text of the standard included significant revision of certain sections and a number of changes to headings and terminology. It was decided to replace the terms *processed wood* with *manufactured wood*, *general measures* with *long-term measures*, and

approved measures with *short-term measures*. A significant amount of text was also moved to appendices.

Throughout the document, the text was changed to clarify and emphasize the role and functions of the exporting and importing countries. The text was also modified to take note of bilateral agreements where relevant. It was noted the use of phytosanitary certificates was not practical in most instances and should be discouraged as far as practically possible but could not be prohibited. Reference to an alternative to the heat treatment marking was deleted, but it was noted that country consultation would determine whether this was acceptable.

The ISC agreed that dunnage is often made from low quality wood, and this usually increased the risk of associated pests. This was accommodated in the text but it was believed the risk should not be over-emphasized. In addition, the text was modified to highlight the fact that phytosanitary measures should not be imposed until signs of live pests had been found. The ISC agreed that an emergency action after detection of a relevant pest was valid, but normal phytosanitary measures could also be instituted.

The appendices were constructed in such a way as to facilitate the modification, deletion or addition of treatments with time without having to revise the body of the ISPM. It was decided that the Secretariat would also include a list of relevant references in an appendix.

The ISC expressed its appreciation to Mr Burgess for his assistance and approved the modified standard[2] for distribution to countries for consultation (Annex IV).

The ISC agreed that Mr Burgess and the IPPC Secretariat would collect relevant technical information on treatments and circulate this to ISC members before the next ISC meeting and make this information available to countries during the consultation process should they request it.

6. PEST REPORTING

The Chairperson introduced the text and background information was provided by the Coordinator. The draft ISPM was generally supported by the ISC but a number of editorial changes were suggested. The ISC agreed that the definition of *occurrence* should not include the term *transient*, and all quotes from the New Revised Text of the IPPC should be in *italics*. The text was modified to encourage countries to report pests, even when there are potentially negative trade effects, and to encourage other countries not to over-react to such reports. In addition, it was agreed that successful eradication and the establishment of pest free areas would be included as reportable phytosanitary events.

The ISC agreed to specifically include reference to the International Phytosanitary Portal (IPP) that is being developed by the IPPC Secretariat as the primary and preferred means of official pest reporting under the IPPC.

The modified standard was approved by the ISC for distribution to countries for consultation (Annex V).

[2] Mr Hedley abstained.

7. INTEGRATED MEASURES FOR PEST RISK MANAGEMENT (SYSTEMS APPROACHES)

The Coordinator provided a brief introduction to the concept of systems approaches and summarized the discussions of the working group that led to the formulation of the draft standard. The Committee noted that the concept of systems approaches is relatively new, but in practice has been used by some countries to a greater or lesser degree for a number of years.

The ISC agreed the principles involved in the HACCP system for risk management in food safety were important for the concept of systems approach. However, the Committee suggested the text needed to clearly distinguish between HACCP systems and the application of a HACCP approach to plant health systems because it may not be necessary to control all critical points to obtain the desired level of phytosanitary protection. It was also decided to remove HACCP from the definitions as it is explained in the text.

The concept and word *redundancy* was difficult to understand and the ISC agreed to delete the use of this term from the text, but ensured the idea and principles were included in the document in the relevant places. The Committee also noted the important role of bilateral cooperation and agreements in systems approaches and the need to highlight this where appropriate in the text.

In order to improve consistency in the use of terms between ISPMs, it was decided to change *phytosanitary procedures* to *phytosanitary measures*. The definitions for *redundancy* and *phytosanitary measure* were deleted, and a definition for *testing* was added.

It was agreed that the phrase *appropriate level of protection* should be avoided, and the text was modified accordingly. In a number of cases, it was decided that examples would be useful for many countries that are dealing with this concept for the first time, although they may not be entirely necessary. In these cases, it would also guide countries to determine the type of risk management options available. For this reason the examples remain in the text and others were added where appropriate.

The modified standard was approved by the ISC for distribution to countries for consultation (Annex VI).

8. GUIDELINES FOR AN IMPORT REGULATORY SYSTEM

The Coordinator noted the long history of this draft standard and acknowledged the efforts of Mr Small who kindly volunteered to revise the previous version based on comments from the Committee one year previous (ISC-1). He noted that the current draft had been provided to the Committee at its second meeting in November 2000 (ISC-2) but that there had not been an opportunity to review it at that time.

Based on general comments, the Chairperson judged that the standard would require substantial discussion. The Committee agreed that there were fundamental changes to be made to the document. In particular, it was agreed that there needed to be a clear decision regarding whether the document should be shortened to exclude many details or have details maintained either in the text or in appendices.

The Committee recommended the establishment a sub-committee to discuss and revise the document. It was agreed that this working group would consist of Mr Small, Mr Smith, Mr Fésus, Mr Pemberton (UK), and one nomination to be received from COSAVE (Mr Morales to provide the nomination). The Committee set a date of 30 June 2001 for the Secretariat to receive comments from others on the present draft. The Coordinator indicated the intention to organize the sub-committee meeting late in 2001 or early in 2002.

9. SPECIFICATIONS FOR ISPMs

The Coordinator introduced seven draft specifications for new/revised ISPMs and explained that specifications agreed by the ISC would be made available to ICPM Members for 60 days following the meeting and would also be discussed in the relevant working groups. He noted that this was a transitional arrangement to begin implementing the new standard-setting procedures. It was anticipated that in the future, consultations on specifications would be completed before working groups were initiated.

Specification 1 (Review and Updating of the Glossary of Phytosanitary Terms): NAPPO has requested the possibility to rotate with EPPO as a collaborator supporting the Glossary working group. This was agreed by the ISC.

Specification 2 (Revision of ISPM No. 1 - Principles of Plant Quarantine as Related to International Trade): References will include various discussion papers developed on this subject in the past.

Specification 3 (Guidelines for Pest Risk Analysis): Although there are discrepancies between ISPM No. 2 and ISPM No. 11, the ISC decided that ISPM No. 2 should undergo a normal review process, and the standard should not be withdrawn in the interim.

Specification 4 (Revision of the Code of Conduct for the Import and Release of Exotic Biological Control Agents): It was noted that relevant parties outside the IPPC should be included in the WG (this should be seen as the process of harmonization). It was agreed that the following needed to included in the scope:

- relevant issues related to the transport of dangerous goods;
- relevant issues to the Biological and Toxin Weapons Convention;
- transport and labeling under the Cartagena Protocol on Biosafety; and
- relevant issues relating to nature conservation.

Specification 5 (Risk Analysis for Environmental Hazards of Plant Pests): Considerable debate took place on this specification and substantial additions and changes were made to the text. EPPO confirmed that they will be the collaborator for the working group and it was noted that the USA has indicated that some funds will be made available to facilitate the participation of developing countries. The ISC noted that NAPPO was expected to provide a discussion paper for the working group. It was also noted the working group needs to address the issue of invasive species not explicitly mentioned in ISPM No. 2 but included in the broad definition of pest and falling within the scope of the IPPC.

Specification 6 (Pest Risk Analysis for Regulated Non-Quarantine Pests): The ISC agreed that the background information needed to be expanded.

Specification 7 (Irradiation as a Treatment for Phytosanitary Purposes): Some ISC members raised concerns that food safety issues would be discussed in this working group. The ISC agreed this was not the intent and the working group would necessarily be limited to issues relevant to phytosanitary measures. The ISC recalled that the working group required extrabudgetary funding (IAEA). The ISC agreed that irradiation for sterile insect production would specifically be excluded. It suggested that an appendix of currently approved irradiation treatments be included.

The modified specifications were approved by the ISC (Annex VII).

10. OTHER BUSINESS

The Coordinator proposed that the next ISC meeting be set for 19-23 November and follow the same general format, i.e. 4.5 days from 0830 - 1800 on Monday -Thursday and 0830 - 1230 on Friday. The ISC agreed to the meeting dates and format, and suggested that the Secretariat also continue to provide overhead projection of the documents to facilitate editing.

11. CLOSURE

The Chairperson expressed his appreciation to the ISC and the Secretariat for their hard work and the meeting was closed.

Interim Standards Committee

THIRD MEETING

Rome: 21-25 May 2001

AGENDA

1. Opening of the Session
2. Welcome Address
3. Election of Chairman
4. Adoption of the Agenda
5. Adoption of the Report of the previous meeting
6. Approval of Draft Standards for Country Consulation:
   - Amendments to the Glossary of phytosanitary terms
   - General considerations and specific requirements for regulated non-quarantine pests
   - Guidelines for regulating wood packing material used in the transport of commodities
   - Integrated measures for pest risk management (systems approaches)
   - Pest reporting
   - Guidelines for an import regulatory system
7. Specifications for ISPMs
8. Review of the Standard-setting Programme
9. Other Business
10. Closure

May 2001

AMENDMENTS TO THE GLOSSARY OF PHYTOSANITARY TERMS

APPROVED BY THE THIRD SESSION OF THE INTERIM STANDARD COMMITTEE (MAY 2001)

1. New Terms and Definitions

Growing period (of a crop)	Time during the production cycle when **plants** are actively growing in an **area** [formerly growing season]

2. Revised Terms and Definitions

Plants *in vitro*	A commodity class for plants in an aseptic medium in a closed container [replaces **Plants in tissue culture**]
Re-exported consignment	**Consignment** which has been imported into a country from which it is then exported. The **consignment** may be stored, split up, combined with other **consignments** or have its packaging changed
Phytosanitary measure (agreed interpretation)	Any **legislation**, **regulation** or **official procedure** having the purpose to prevent the **introduction** and/or **spread** of **quarantine pests**, or to limit the economic impact of **regulated non-quarantine pests**
Consignment in transit	A **consignment** which is not imported into a country but passes through it to another country, subject to official procedures which ensure that it remains enclosed, and is not split up, not combined with other **consignments** nor has its packaging changed
Occurrence*	The presence in an area of a pest officially recognized to be indigenous or introduced and/or not officially reported to have been eradicated
Outbreak	An isolated, recently detected pest population

3. Terms to be Deleted

Growing season	Period of the year when plants will actively grow in an area [to be replaced by growing period]
Country of re-export	Country into which a consignment of plants, plant products, or other regulated articles has been imported and was stored, split up, had its packaging changed or was otherwise exposed to contamination by pests, prior to export to a third country
Region	The combined territories of the member countries of a **Regional Plant Protection Organization**

4. Other Recommendations

a) Use the term *issue* instead of *issuance* in English text.

b) *Emergency actions* in Article VII.6 of the English version of the New Revised Text of the IPPC should be interpreted to be consistent with the Glossary term *emergency measures*.

c) An interpretation of the term *phytosanitary measure* is necessary because the term as defined in Article II of the New Revised Text of the IPPC is inadequate as regards its application to regulated non-quarantine pests.

d) Recognize that *actions* in English is interpreted to be consistent with *medidas* (Spanish) and *mesures* (French).

e) Recognize that *outbreak* in English is translated as *apparition* in the French version of the New Revised Text of the IPPC.

f) Correct the French definition of *analyse* as follows:

Analyse	Examen officiel, autre que visuel, permettant de déterminer la présence ou l'absence d'organismes nuisibles, ou le cas échéant, de les identifier [FAO, 1990; révisée FAO, 1995; CEMP, 1999; précédemment Test]

g) Maintain *marchandise* as the French translation of the English term c*ommodity*.

h) Use *exigence* as the French translation for the English term *requirement* recognizing that this is equivalent to *disposition* (as in the heading of Article VII of the New Revised Text of the IPPC) and *prescription* (as in the WTO Agreement on the Application of Sanitary and Phytosanitary Measures).

DRAFT STANDARD
MAY 2001
ISC-2001-1

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

REGULATED NON-QUARANTINE PESTS: CONCEPT AND APPLICATIONS

Secretariat of the International Plant Protection Convention
Food and Agriculture Organization
of the United Nations
Rome, 200-

INTRODUCTION

SCOPE

This standard describes the concept of regulated non-quarantine pests and describes its application.

REFERENCES

Agreement on the Application of Sanitary and Phytosanitary Measures, 1994. World Trade Organization, Geneva.
Determination of pest status in an area, 1998. ISPM Pub. No. 8, FAO, Rome.
FAO. 1967. *Types of losses caused by plant diseases*, by J.C. Zadoks. FAO Symposium on crop losses. Rome, 2-6 October 1967, pp. 149-158.
Glossary of phytosanitary terms, 1999. ISPM Pub. No. 5, FAO, Rome.
Glossary supplement no. 1: Guidelines on the interpretation and application of the concept of official control for regulated pests, 2001. ISPM Pub. No. 5, FAO, Rome.
Guidelines for pest risk analysis, 1996. ISPM Pub. No. 2, FAO, Rome.
Guidelines for surveillance, 1998. ISPM Pub. No. 6, FAO, Rome.
New Revised Text of the International Plant Protection Convention, 1997. FAO, Rome.
Principles of plant quarantine as related to international trade, 1995. ISPM Pub. No. 1, FAO, Rome.

DEFINITIONS AND ABBREVIATIONS[1]

Intended use*	Declared purpose for which plants, plant products, or other regulated articles are imported, produced, or used
Official control	The active enforcement of mandatory phytosanitary regulations and the application of mandatory phytosanitary procedures with the objective of eradication or containment of quarantine pests or for the management of regulated non-quarantine pests [see Glossary supplement no. 1]
Phytosanitary action	An official operation, such as inspection, testing, surveillance, or treatment, undertaken to implement phytosanitary regulations or procedures
Phytosanitary regulation	Official rule to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests, including establishment of procedures for phytosanitary certification
Planting (including replanting)	Any operation for the placing of plants in a growing medium, or by grafting or similar operations, to ensure their subsequent growth, reproduction or propagation
Plants for planting	Plants intended to remain planted, to be planted or

[1] Terms marked with an (*) are new or revised

	replanted
Quarantine pest	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled
Regulated area	An area into which, within which and/or from which plants, plant products and other regulated articles are subjected to phytosanitary regulations or procedures in order to prevent the introduction and/or spread of quarantine pests or to limit the economic impact of regulated non-quarantine pests
Regulated non-quarantine pest	A non-quarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party
RNQP*	Regulated Non-Quarantine Pest

OUTLINE OF REQUIREMENTS

Pests that are not quarantine pests, may be subject to phytosanitary measures because their presence in plants for planting results in economically unacceptable impacts. They are defined in the New Revised Text of the IPPC as regulated non-quarantine pests (RNQP). Several provisions of the New Revised Text of the IPPC deal with RNQP. Measures applied at import for RNQP should be equivalent to the measures applied within the importing country in order to protect crops under the official control programme.

The distinction between RNQP and quarantine pests, both of which are regulated pests, can be described in terms of the pest status, presence, pathway/commodity, economic impacts and regulatory status. Non-regulated pests fall outside the scope of the New Revised Text of the IPPC.

The application of the concept of RNQP follows the principles of technical justification (PRA), risk assessment, managed risk, minimal impact, equivalence, non-discrimination, and transparency. Each element of the definition of RNQP has specific meaning, and as a consequence, host-pest interactions, non-phytosanitary certification programs which contain elements suitable for phytosanitary certification, tolerances and non-compliance actions all need to be considered, when defining the requirements for the application of measures for RNQP.

GENERAL REQUIREMENTS

1. Purpose

Certain pests that are not quarantine pests are subject to phytosanitary measures because their presence in plants for planting results in economically unacceptable impacts associated with their intended use. Such pests are known as regulated non-quarantine pests (RNQP) and are possibly widespread in the importing country. Where official control is applied to plants for planting to protect them from pests borne by those plants produced within their country, then phytosanitary measures may be applied to the same extent to those same pests on imported plants for planting of the same species.

2. Provisions of the IPPC Regarding Regulated Non-Quarantine Pests

In addition to definitions found in Article II, as well as other references to regulated pests in the New Revised Text of the IPPC, the following provisions of the New Revised Text of the IPPC are relevant to regulated non-quarantine pests.

Article VII.1
With the aim of preventing the introduction and/or spread of regulated pests into their territories, contracting parties shall have sovereign authority to regulate, in accordance with applicable international agreements, the entry of plants and plant products and other regulated articles and, to this end, may:

a) *prescribe and adopt phytosanitary measures…,*
b) *refuse entry, detain or require treatment, destruction or removal …;*
c) *prohibit or restrict the movement of regulated pests….*

Article VI.1
Contracting parties may require phytosanitary measures for quarantine pests and regulated non-quarantine pests, provided that such measures are:

a) *no more stringent than measures applied to the same pests, if present within the territory of the importing contacting party; and*
b) *limited to what is necessary to protect plant health and/or safeguard the intended use and can be technically justified by the contracting party concerned.*

Article VI.2
Contracting parties shall not require phytosanitary measures for non-regulated pests.

Article IV.3
Each contacting party shall make provision, to the best of its ability, for the following:

a) *the distribution of information within the territory of the contracting party regarding regulated pests and the means of their prevention and control ...*

Article VII.2i
Contracting parties shall, to the best of their ability, establish and update lists of regulated pests, using scientific names, and make such lists available to the Secretary (of the Commission on Phytosanitary Measures), to regional plant protection organizations of which they are members and, on request, to other contracting parties.

Text of the Model Phytosanitary Certificate:
This is to certify that the plants or plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party

and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.

They are deemed to be practically free from other pests.

3. Criteria for Defining RNQP

The definition of RNQP provides criteria to distinguish this category of pests from quarantine pests. Further understanding of certain words in the definition is important for the proper interpretation and application of the concept.

3.1 "Plants for planting"

The concept of RNQP is specifically limited in application to "plants for planting". Plants are defined as "living plants and parts thereof, including seeds". Therefore, "plants for planting" includes seeds, bulbs and tubers, and various kinds of vegetative propagating material, which may be whole plants or parts of plants (such as cuttings).

Since plants for planting includes "plants intended to remain planted", pot plants (including bonsais) are included. It should be recognized that risks associated with plants that are intended to remain planted will not be the same as for plants intended for multiplication.

3.2 "Intended use"

The intended use of plants for planting may be:

- growing for direct production of other commodity classes (e.g. fruits, cut flowers, wood, grain, etc.)
- to remain planted (e.g. ornamentals)
- increasing the number of the same plants for planting (e.g. tubers, cuttings, seeds).

It should be recognized that risk of unacceptable economic impact varies with different pests, commodities, and intended uses, including distinctions that may be made between commercial and non-commercial use where technically justified.

3.3 "Those plants"

"Those plants" refers to the specific plants (species, varieties, etc.) in the imported consignment that is regulated for non-quarantine pests.

3.4 "Economically unacceptable impact"

The definition for a regulated non-quarantine pest refers to an unacceptable economic impact. This means that losses are measured in terms of economic impacts, and that these are judged to be acceptable or unacceptable.

For quarantine pests, economic impacts include market access as well as those impacts that may be less easily quantified in direct economic terms, such as certain impacts to the environment as related to plant health. Because RNQP are usually already present, there are not new or additional impacts related to market access or environmental health. Therefore these impacts are not considered relevant factors in determining economic impacts for RNQP.

Relevant factors in determining unacceptable economic impacts should only be those

impacts as a result of direct losses. Examples of primary direct losses that occur as a result of the pests being present in the plants for planting are:

- reduction of quantity of marketable yield (e.g. reduction in yield)
- reduction of quality (e.g. reduced sugar content in grapes for wine, downgrading of marketed product)
- extra costs of pest control (e.g. roguing, pesticide application)
- extra costs of harvesting and grading (e.g. culling)
- costs of replanting (e.g. due to loss of longevity of plants)
- loss due to the necessity of growing substitute crops (e.g. due to need to plant lower yielding resistant crops of the same type or different crops).

Calculations of unacceptable economic impact of RNQP should not include indirect losses such as economic and social implications of plant pests beyond their immediate agricultural effects.

Examples of indirect losses are:

- increase of unemployment
- decreased returns on investments
- increased costs to consumers
- increased requirements for subsidies
- decreased purchasing power of producers.

3.5 "Regulated"

"Regulated" in the definition of RNQP refers to official control. An official control programme for RNQP can be applied on a national, sub-national, or local area basis. (see *Glossary supplement no. 1: Guidelines on the interpretation and application of the concept of official control for regulated pests*, 2001)

4. Relevant Principles

The application of the concept of RNQP follows in particular the principles of technical justification (PRA), risk assessment, managed risk, minimal impact, equivalence, non-discrimination, and transparency.

4.1 Technical justification (PRA)

Phytosanitary measures covering RNQP should be technically justified. The classification of a pest as an RNQP and any restrictions placed on the import of the plant species with which it is associated should be justified by pest risk analysis.

4.1.1 Risk assessment

Pest risk assessment for RNQP is not the same as pest risk assessment performed for a potential quarantine pest because it is not necessary to evaluate the probability of establishment, nor the long-term economic impact of an RNQP. However, it is necessary to demonstrate that plants for planting are a pathway, and that plants for planting are the main source of infestation that result in economically unacceptable impacts.

4.2 Managed risk, minimal impact and equivalence

Risk management for RNQP requires a decision regarding whether the economic impact determined through risk assessment represents an "unacceptable level of risk".

This decision should be guided by the need for consistency with regulations covering other pest/plant species combinations with similar risks. Decisions regarding the strength of the measures to be used for risk management should be in accordance with the principles of non-discrimination, managed risk, and minimal impact, and should allow for the acceptance of equivalent measures where appropriate.

4.3 Non-discrimination

A pest can only be an RNQP if there is official control within the territory of the contracting party requiring that no plants for planting with the same intended use (one or a number of species), irrespective of their origin, be sold or planted if containing the pest or containing the pest above a specified tolerance.

4.4 Transparency

National regulations and requirements for RNQP, including details of official control programmes should be published and transmitted to any contracting party that may be directly affected (Article VII.2b). The technical justification for categorizing a pest as RNQP and the justification for the strength of the measures applied for RNQP should be made available by the importing contracting party upon request of another contracting party (Article VII.2c).

5. Comparison between RNQP and Other Pests

5.1 Comparison with quarantine pests

Quarantine pests and RNQP can be compared on the basis of four elements of their defining criteria; pest status in the importing country, pathway/commodity, economic impacts associated with the pest, the application of official control.

The table below provides a summary of the distinctions.

Comparison of Quarantine pests and RNQP

Defining criteria	**Quarantine pest**	**RNQP**
Pest status	Absent or of limited distribution	Usually widely distributed
Pathway	Phytosanitary regulations and procedures for any pathway	Phytosanitary regulations and procedures only on plants for planting
Economic impact	Impact is predicted	Impact is known
Regulatory status	Under official control if present with the aim of eradication or containment	Under official control with the aim of suppression

5.1.1 Pest status

In the case of quarantine pests, phytosanitary measures focus on reducing the likelihood of introduction, or if the pest is present, reducing the likelihood of spread, which may be considered equivalent to reducing the likelihood of introduction into new areas. This means that in the case of a quarantine pest, the pest is absent or is being prevented from invading new areas and is being officially controlled where it occurs. In the case of an RNQP, the likelihood of introduction is not relevant as a criterion. It may often be assumed that the pest is present and quite possibly widespread.

5.1.2 Pathway

Phytosanitary regulations and procedures may be applied for quarantine pests associated with any host or pathway. For RNQPs, the only pathway that may be regulated is plants for planting and only specific host(s) would be relevant.

5.1.3 Economic impacts

The primary difference between the definitions of a quarantine pest and an RNQP with respect to economic impacts is the distinction between *potential* economic importance for quarantine pests and *known* economically unacceptable impacts for regulated non-quarantine pests. Since the RNQP is present in the country, detailed first-hand information should be available about its impacts, which are therefore known rather than predicted as for quarantine pests that are not yet present in that country. Whereas the potential economic importance associated with quarantine pests may include consideration of factors such as market access into other countries and environmental effects that are not relevant for RNQP because the pests are usually established.

5.1.4 Regulatory status

All regulated pests are subject to official control. Quarantine pests are subject to official control, in the form of phytosanitary measures for their erradication and/or containment, if present in the area concerned. RNQPs, which are in any case present in the area concerned, are subject to official control in the form of phytosanitary measures for their suppression.

5.2 Comparison with pests not regulated for phytosanitary purposes

Certain pests may be subject to regulatory measures that can not be technically justified as phytosanitary measures. These are commonly known as “quality pests”, but this term has a variety of interpretations and does not clearly indicate the phytosanitary status. Such pests should not be subject to phytosanitary regulations at import.

6. Application

When an NPPO wants to designate certain pests as RNQP, the NPPO needs to consider the elements described above. In addition, some specific issues, such as host-pest interactions, and the existence of certification programs (e.g. seed certification) for plants for planting need to be considered.

6.1 Host-pest interaction

RNQP should be defined in relation to a specified host or hosts. The same pest may not be regulated as an RNQP on other hosts. For example, a virus may cause

unacceptable economic impact in one species of plants for planting, but not in another. Distinctions should be made regarding the taxonomic level for the application of phytosanitary requirements for RNQPs where information available on host-pest interaction supports such distinctions (e.g. varietal resistance/susceptibility, pest virulence).

6.2 Certification schemes[2]

Programmes for the certification of plants for planting (sometimes known as "certification schemes") frequently include specific requirements for pests, in addition to elements such as requirements for varietal purity, color and size of the product, number of generations, etc. The pests concerned may be RNQPs if this can be technically justified and the certification programme can be considered to be official control, i.e. carried out, enforced, monitored or audited by the national government or NPPO, and at minimum audited by the NPPO. In general, the pests for which certification programmes are intended are those which cause unacceptable economic impact for the crop concerned at the national level and are mainly transmitted in plants for planting, thereby qualifying as RNQP. However, not all pests mentioned in certification programmes are necessarily RNQP. In particular, some existing programmes may include tolerances for pests or pest damage whose technical justification has not been demonstrated.

6.3 Tolerances

- The application of the concept of RNQP requires acceptance and establishment of appropriate tolerances for RNQP levels in official control programs and corresponding requirements at import. The level of tolerance depends on the technical justification and follows in particular the principles of non-discrimination and minimal impact. In some cases, if technically justified, this tolerance may be zero.

6.4 Non-compliance action

Phytosanitary action taken for non-compliance with phytosanitary requirements for RNQP should be in accordance with the principles of non-discrimination and minimal impact.

Options include:

- downgrading (change commodity class or intended use)
- treatment
- redirection for another purpose (e.g. processing)
- redirection to origin or another country
- destruction.

[2] This certification is not to be confused with phytosanitary certification.

DRAFT STANDARD
MAY 2001
ISC-2001-1

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

GUIDELINES FOR REGULATING WOOD PACKING MATERIAL USED IN THE TRANSPORT OF COMMODITIES

Secretariat of the International Plant Protection Convention
Food and Agriculture Organization
of the United Nations
Rome, 200-

INTRODUCTION

SCOPE

This standard describes phytosanitary measures to reduce the risk of introduction and/or spread of quarantine pests associated with wood packing materials in use for the transport of commodities in international trade.

REFERENCES

Agreement on the Application of Sanitary and Phytosanitary Measures, 1994. World Trade Organization, Geneva.
Glossary of phytosanitary terms, 1999. ISPM Pub. No. 5, FAO, Rome.*Export certification system*, 1997. ISPM Pub. No. 7, FAO, Rome
Guidelines for phytosanitary certificates, 2001. ISPM No. 12, FAO, Rome.
Guidelines on notification of non-compliance and emergency action, 2001. ISPM No. 13, FAO, Rome
ISO2: International Organization for Standardization two-letter country code, 2001. ISO Online (http://www.iso.ch).
New Revised Text of the International Plant Protection Convention, 1997. FAO, Rome.
Principles of plant quarantine as related to international trade, 1995. ISPM Pub. No. 1, FAO, Rome.

DEFINITIONS AND ABBREVIATIONS[1]

Additional declaration	A statement that is required by an importing country to be entered on a phytosanitary certificate and which provides specific additional information pertinent to the phytosanitary condition of a consignment
Bark-free wood*	Wood from which all bark except vascular cambium, ingrown bark around knots, and bark pockets between rings of annual growth has been removed
Chemical pressure impregnation*	Impregnation of wood with a chemical preservative through a process of pressure in accordance with an officially recognized technical specification
Certificate	An official document which attests to the phytosanitary status of any consignment affected by phytosanitary regulations
Commodity	A type of plant, plant product, or other article being moved for trade or other purpose
Consignment	A quantity of plants, plant products and/or other articles being moved from one country to another and covered, when required, by a single phytosanitary certificate (a consignment may be composed of one or more commodities)
CPI*	Chemical pressure impregnation

[1] Terms marked with an (*) are new or revised

Debarking	Removal of bark from round wood (debarking does not necessarily make the wood bark-free)
Dunnage*	Wood packing material used to support a consignment but which does not remain associated with the consignment
Emergency action	A prompt phytosanitary action undertaken in a new or unexpected phytosanitary situation
Emergency measure	A phytosanitary regulation or procedure established as a matter of urgency in a new or unexpected phytosanitary situation. An emergency measure may or may not be a provisional measure
Find free	To inspect a consignment, field or place of production and consider it to be free from a specific pest
Free from (of a consignment, field, or place of production)	Without pests (or a specific pest) in numbers or quantities that can be detected by the application of phytosanitary procedures
Fumigation	Treatment with a chemical agent that reaches the commodity wholly or primarily in a gaseous state
Heat treatment*	The process in which a commodity is heated until it reaches a minimum temperature for a minimum period of time according to an officially recognized technical specification
HT*	Heat treatment
Infestation (of a commodity)	Presence in a commodity of a living pest of the plant or plant product concerned. Infestation includes infection
KD*	Kiln drying
Kiln-drying*	A process in which wood is dried in a closed chamber using heat and/or humidity control to achieve a required moisture content
NPPO	National Plant Protection Organization
Official	Established, authorized or performed by a National Plant Protection Organization
Phytosanitary action	An official operation, such as inspection, testing, surveillance or treatment, undertaken to implement phytosanitary regulations or procedures
Phytosanitary certificate	Certificate patterned after the model certificates of the IPPC
Phytosanitary measure (agreed interpretation)	Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests

Phytosanitary procedure	Any officially prescribed method for implementing phytosanitary regulations including the performance of inspections, tests, surveillance or treatments in connection with regulated pests
Phytosanitary regulation	Official rule to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests, including establishment of procedures for phytosanitary certification
Plant products	Unmanufactured material of plant origin (including grain) and those manufactured products that, by their nature or that of their processing, may create a risk for the introduction and spread of pests
Quarantine pest	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled
Raw wood*	Wood which has not undergone processing or treatment
Regulated article	Any plant, plant product, storage place, packaging, conveyance, container, soil and any other organism, object or material capable of harbouring or spreading pests, deemed to require phytosanitary measures, particularly where international transportation is involved
Treatment	Officially authorized procedure for the killing, removal or rendering infertile of pests
Wood	A commodity class for round wood, sawn wood, wood chips or dunnage, with or without bark
Wood packing material*	Wood or wood products (excluding paper products) used in supporting, protecting or carrying a consignment

OUTLINE OF REQUIREMENTS

Wood packing material is frequently made of unprocessed, low quality wood that is frequently a high risk pathway for the introduction and spread of pests. The application of measures with a lasting effect (long-term measures) that are effective against most pests, attested by appropriate markings, should be acceptable as the basis for authorizing the entry of wood packing materials. Measures without a lasting effect (short-term measures) which are as effective as long-term measures but have no long-term preventative effects should also be acceptable where accompanied by appropriate certificates.

Processed wood packing materials may be exempted from these measures. Bilateral agreements may replace the requirements for long-term or short-term measures, where technically justified.

If live pests or signs of live pests are detected in the wood packing material that has had long or short-term measures applied, action can be taken and the material may be treated or disposed.

1. Purpose

Wood packing such as pallets, dunnage, crating, packing blocks, drums, cases, load boards, pallet collars, and skids can be present in almost any imported consignment, including consignments which would not normally be the target of phytosanitary inspection. Wood packing is frequently made of non-manufactured, low quality, inexpensive raw wood that may not have undergone sufficient processing or treatment to remove or kill pests present in the raw wood and therefore becomes a pathway for the introduction and spread of pests. Furthermore, wood packing is very often re-used (in that packing received with an imported consignment may be used to accompany an exported consignment). Therefore, the true origin of any piece of wood packing material is difficult to determine and thus its phytosanitary status cannot be ascertained.

NPPOs may establish requirements for wood packing materials to manage the pest risk associated with this pathway. The process for establishing import requirements for wood packing may be different from that used for commodities moving as consignments. The normal process of undertaking risk analysis to determine if measures are necessary and the strength of such measures is frequently not possible for wood packing material because its origin and phytosanitary status may not be known. For this reason, it is desirable to regulate wood packing broadly by applying globally accepted measures that eliminate the pest risk for most important regulated pests and significantly reduce the risk for a number of others.

2. Exempted Wood Packing Materials

Certain wood packing materials by their nature, processing, handling, or origin are not considered a pathway for the introduction of quarantine pests and may be exempt from being regulated.

2.1 Processed wood packing material

Wood packing made wholly of wood-based products such as plywood, particle board, oriented strand board or veneer that have been created using glue, heat and pressure or a combination thereof should be considered sufficiently processed to have removed or killed any pests that may have been associated with the raw wood and should therefore not be regulated.

Wood packing materials such as veneer peeler cores[2], sawdust, wood wool, and shavings, and raw wood cut into thin[3] pieces that by their nature, processing or handling are not pathways for introduction of quarantine pests should not be regulated.

2.2 Other exemptions

The NPPO of an importing country should consider exempting wood packing material exported from any other country (or particular exporter) from specific requirements where evidence is provided to demonstrate that the pest risk is adequately managed.

Certain types of timber (e.g. tropical hardwoods to temperate countries) may also be considered exempt where the importing NPPO has determined that such products are

[2] Veneer peeler cores are a by-product of veneer production involving high temperatures and comprising the center of a log remaining after the peeling process.

[3] Thin wood is considered to be 6mm thickness or less according to the Customs Harmonized Commodity Description and Coding System (the Harmonized System or HS).

not important pathways for the introduction and spread of quarantine pests.

3. Long-term Measures

A long-term measure is any treatment, processing, or a combination of these that are significantly effective against most pests. The choice of a long-term measure for wood packing material is based on consideration of:

- the range of pests which may be affected
- the efficacy of the measure
- a change in the character of the wood packing material which has a long-term effect in reducing risk
- technical and/or commercial feasibility.

Long-term measures should be accepted by all NPPOs as the basis for authorizing the entry of wood packing material without further requirements except where it is determined through interceptions and/or PRA that specific quarantine pests associated with certain types of wood packing from specific sources require more rigorous measures.

Long-term measures are specified in Appendix I.

Wood packing subjected to a long-term measure should display a specified mark shown in Appendix II.

4. Short-term Measures

Short-term measures satisfy the same criteria as long-term measures except that they do not result in a change in the character of the wood packing material that has a long-term effect in reducing risk of pest introduction.

Short-term measures should be accepted by all NPPOs as the basis for the entry of wood packing materials subject to specified time limits for the period between treatment and shipment, unless it has been determined through interceptions and/or PRA that specific quarantine pests associated with certain types of wood packing material from specific sources require more rigorous measures.

Short-term measures are specified in Appendix III.

Wood packing subjected to a short-term measure should be accompanied by an official certificate attesting the treatment. This may be a commercial treatment certificate. Alternatively, the certification of fumigation treatment may also be based on another type of certification accepted by the importing country.

4.1 Fumigation using methyl bromide

Fumigation with methyl bromide according to the specifications in Appendix III is a short term measure. However, NPPOs should recognize that methyl bromide treatment does not change the character of the wood and has no residual effect and therefore does not prevent re-infestation or secondary infestation. NPPOs of importing countries may consider establishing time limits for the period between fumigation and shipment and may consider other safeguards to ensure the phytosanitary status of the wood packing treated by methyl bromide fumigation.

Wood packing treated by fumigation with methyl bromide should be accompanied by an official certificate attesting to the treatment. This may be a commercial treatment certificate. Alternatively, the certification of fumigation treatment may also be based on another type of certification accepted by the imported country.

5. Addition of Measures

Measures for wood packing materials when demonstrated to provide an appropriate level of phytosanitary protection are classified as either short-term or long-term measures. Examples of measures that may be classified as either short-term or long-term when appropriate data becomes available are listed in Appendix IV.

6. Bilateral Agreements

NPPOs may accept any measures other than those listed in Appendix I and III by bilateral arrangement with their trading partners.

In particular, in cases where measures listed in Appendix I and III cannot be applied or verified in an exporting country, the NPPO of the importing country would be technically justified in requiring as a minimum that wood packing material is made of bark-free wood that is free from pests and signs of live pests. On arrival, it may be subject to additional measures such as inspection, or treatment or disposal at the discretion of the NPPO of the importing country.

7. Dunnage

Dunnage is often low quality wood and requires special consideration. NPPOs of importing countries should accept dunnage that is marked as complying with long-term measures. However, operational limitations may make it impractical to apply measures and/or verify whether dunnage in service has been marked. In this case, NPPOs would be technically justified in requiring as a minimum that dunnage is made from bark-free wood that is free from pests and signs of live pests.

8. Compliance Checks on Procedures Applied Prior to Export

The NPPO of the exporting country has responsibility for ensuring that systems for exports meet the requirements set out in this standard or those agreed bilaterally. This includes monitoring certification and marking systems that verify compliance, and establishing inspection procedures (see also ISPM No. 7, *Export certification system*).

9. Other Procedures and Requirements

The regulation of wood packing material requires that NPPOs have policies and procedures for other aspects of their responsibilities related to wood packing material.

9.1 Transit arrangements

Where consignments moving in transit have exposed wood packing material which has not met the requirements for long-term or short-term measures, the NPPOs of the transit countries may require measures in addition to those of the importing country to

ensure that wood packing material does not present an unacceptable risk. The NPPO of the exporting country should consult with the NPPO of the importing and transit country to reach agreement on the requirements to be met for consignments in transit.

9.2 Non-compliance and phytosanitary action for reinfestation

9.2.1 Non-compliance

Where requirements established by the NPPO of the importing country have not been met or the wood packing material is found to be infested with regulated pests, action may be taken. This action may take the form of treatment, disposal or refused entry. The NPPO of the exporting country should be notified (see ISPM No. 13: *Guidelines on notification of non-compliance and emergency action*).

9.2.2 Reinfestation

NPPOs may also take action for wood packing material treated or processed to be free of pests which has become (re)infested.

9.3 Signs of live pests

Phytosanitary actions should not be taken without sufficient technical justification. Where a long-term or short-term measure has been applied, action should only be taken on wood packing material if there are signs of live pests.

Where a long-term or short-term measure has not been applied, action can be taken based on signs of live pests (e.g. insect holes and frass) or bark on raw wood if quarantine pests have been found to be associated with such signs at the time of inspection, or on previous inspection(s) of equivalent consignments. Likewise, action may be based on information indicating the likelihood that pests are associated with the sign.

In the case of consignments with a new type of wood packing material or from a new source, it may be justified to take emergency action based on the signs of live pests, or bark without detection of pests.

9.4 Disposal

Disposal of wood packing material is a risk management option that may be used by the NPPO of the importing country upon arrival of the wood packing material where treatment is not available or desirable. The following methods are recommended for the destruction of wood packing material where this is required.

Incineration
Complete burning

Burial
Deep burial in sites approved by appropriate authorities. (N.B. not a suitable disposal option for wood infested with termites).

Processing
Chipping and further processing in a manner approved by the NPPO of the importing country for the elimination of pests of concern (e.g. manufacture of oriented strand board).

Other methods
Procedures endorsed by the NPPO as effective for the pests of concern.

Wood packing material that requires emergency action should be appropriately safeguarded prior to treatment or disposal to prevent escape of any pest between the time of the detection of the non-compliance and the time of treatment or disposal.

APPENDIX I

LONG-TERM MEASURES ASSOCIATED WITH WOOD PACKING MATERIAL

Heat treatment (HT)

Wood packing material should be heated in accordance with a specific time-temperature schedule that achieves a minimum wood core temperature of 56°C for a minimum of 30 minutes[4]. Heat treatment is indicated by the mark HT. (see Appendix II)

Absence of bark is not required.

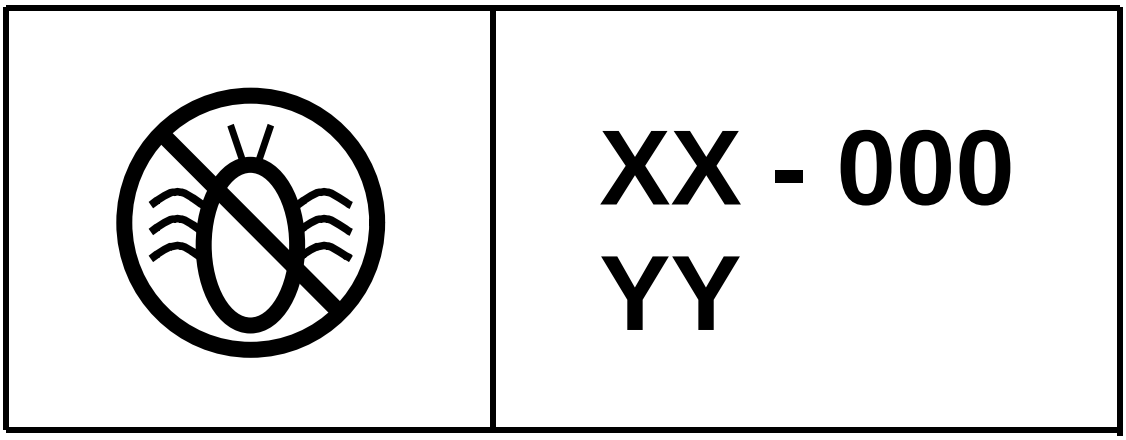
Kiln drying (KD), chemical pressure impregnation (CPI), or other treatments may be considered HT treatments to the extent that these meet the HT specifications.

[4] A minimum core temperature of 56° C for a minimum of 30 min. is chosen in consideration of the wide range of pests for which this combination is documented to be lethal and a commercially feasible treatment. Although it is recognized that some pests are known to have a higher thermal tolerance, quarantine pests in this category are managed by NPPOs on a case by case basis. It is noted that the absence of bark is not required.

APPENDIX II

MARKING FOR LONG-TERM MEASURES

The mark shown below is to certify that the wood packing material that bears the mark has been subjected to a long-term measure.



The mark should at minimum include the:

- symbol
- ISO two letter country code followed by a unique number assigned by the NPPO to the producer of the wood packing material, who is responsible for ensuring appropriate wood is used and properly marked
- IPPC abbreviation for the long-term measure used (e.g. HT).

NPPOs or producers may at their discretion add control numbers or other information used for identifying specific lots. Other information may also be included provided it is not confusing, misleading, or deceptive.

Markings should be:

- according to the model shown here
- legible
- permanent and not transferable (tags are not allowed)
- placed in a visible location on at least two opposite sides of the article being certified.

The use of red or orange should be avoided since these colors are used in the labeling of dangerous goods.

Reconditioned wood packing material or articles should be re-certified and re-marked. Old marks should be removed or covered.

Shippers should be encouraged to use appropriately marked wood for dunnage.

APPENDIX III

SHORT-TERM MEASURES ASSOCIATED WITH WOOD PACKING MATERIAL

Methyl bromide fumigation for wood packing material
The minimum standard for methyl bromide fumigation treatment for wood packing material is as follows:

Temperature	**Dosage Rate** g/m^3	**Minimum concentration readings (grams) at:**			
		0.5 hr.	**2 hrs.**	**4 hrs.**	**16 hrs.**
21^o C or above	48g	36g	24g	17g	14g

For every 5^0C the minimum ambient temperature is expected to fall below 21^0C a further $8g/m^3$ should be added. The minimum temperature should not be less than 10^0C and the minimum exposure time should be 16 hours.[5]

Any method of fumigation that meets or exceeds this specification should be accepted.

[5] Certain countries require that the minimum commodity temp should be higher

APPENDIX IV

ADDITION OF MEASURES

Treatments[6] that may be considered include but are not limited to:

Fumigation
Phosphine
Sulfuryl fluoride
Carbonyl sulphide

CPI
High-pressure/vacuum process
Double vacuum process
Hot and cold open tank process
Sap displacement method

Irradiation
Gamma radiation
X-rays
Microwaves
Infra red

Controlled atmosphere

Chemical dip

[6] Certain treatments such as phosphine fumigation and some CPI treatments are generally believed to be very effective but at present lack experimental data concerning efficacy which would allow them to be either general or approved measures. This present lack of data is specifically in relation to the elimination of raw wood pests present at the time of application of the treatment.

APPENDIX V

REFERENCES

HEAT TREATMENT

Allen, E. 2000. Efficacy of heat treatment for solid wood packing material. Draft report for the IPPC Expert Working Group on Wood Packing (incl. bibliography), Mexico City, February 2001.

Animal and Plant Health Inspection Service. 1985. Plant protection and quarantine treatment manual. Washington, DC: U.S. Department of Agriculture, Animal and Plant Health Inspection Service: Sec. 6, T 404.

Baker, K.F. 1969. Aerated-steam treatment of seed for disease control. *Horticultural Research* 9:59-73.

Baker, K.F. & Fuller, W.H. 1968. Soil treatment by microwave energy to destroy plant pathogens. *Phytopathology* 59: 193-97.

Brunt, A. K, K. Crabtree, M. Dallwitz, A. Gibbs, & Watson, L. 1996. Viruses of plants: Descriptions and lists from the VIDE database. C.A.B. International, UK. 1484 pp.

Burdette, E.C. 1976. Effects of microwave treatment of Anobiidae infested wood blocks. Atlanta, GA: Georgia Institute of Technology, Engineering Experiment Station.

Cartwright, K. & Findlay, W.P.K. 1958. Decay of timber and its prevention. *Forest* Her Majesty's Stationary Ofc., 2nd ed. London. 332 pp.

Chen, T.H. 1985. Bamboo mosaic virus associated with a mosaic disease of bamboos in Taiwan. *Plant Protection Bulletin, Taiwan* 27(2): 111-16.

Chidester, M.S. 1937. Temperature necessary to kill fungi in wood. *Proc. American Wood-Preservers' Assoc.* 33: 312-24.

Chidester, M.S. 1939. Further studies on temperatures necessary to kill fungi in wood. *Proc. American Wood-Preservers' Assoc.* 35: 319-24.

Department of Scientific and Industrial Research, Great Britain. 1957. The kiln sterilization of *Lyctus*-infested timber. Leafl. 13. Princes Risborough, UK: Forest Products Research Laboratory. 4pp.

Dwinell, L.D. 1986. Ecology of the pinewood nematode in southern pine chip piles. USDA For. Service, Southeast. For. Expt. Sta. Res. Paper SE-258. 14 pp.

Dwinell, L.D. 1987. Pine wood nematode in southern pine chips exported from Georgia. *In* Wingfield, M.J., ed. *Pathogenicity of the Pine Wood Nematode*, p. 50-57. St. Paul, MN: APS Press.

Dwinell, L.D. 1990a. Heat-treating and drying southern pine lumber infested with pine wood nematodes. *Forest Prod. J.* 40(11/12): 53-56.

Dwinell, L.D. 1990b.Thermal death point of *Bursaphelenchus xylophilus* in southern pine chips. (Abstract). *Nematologica* 36: 346.

Dwinell, L.D. 1994. Using heat to decontaminate pine chips infested with the pinewood nematode. Ann. Intl. Res. Conf. Methyl Bromide Alternatives and Emissions Reductions, Kissammee, FL, Nov. 13-16, 1994. p. 96-1,2.

Dwinell, L.D. 1995. Using heat to decontaminate unbarked Virginia pine logs. (Abstract). *Proc. Ann. Meeting Forest Products Society*. Portland, OR, June 1995.

Dwinell, L.D. 1996a. Alternatives to methyl bromide for eradicating pests in exported softwood chip, lumber, and logs. *USDA Methyl Bromide Alternatives Newsletter* 2: 7-8.

Dwinell, L.D. 1996b. Methyl bromide alternatives for decontaminating softwood chips, lumber and logs. Ann. Res. Conf. on Methyl Bromide Alternatives and Emissions Reductions, Orlando, FL, Nov. 4-6, 1996. p. 64-1,3.

Dwinell, L.D. 1996c. Using heat to decontaminate softwood chips, lumber and logs. *In, Importing Wood Products: Pest Risks to Domestic Industries*. Portland, OR, March 4-6, 1996.

Dwinell, L.D. 1997. Pinewood nematode: Regulation and mitigation. *Annual Review of Phytopathology* 35: 153-166.

Dwinell, L.D. 2001. Potential use of heat pasteurization to manage fungi in hardwood lumber. Personal communication on unpublished preliminary results.

Dwinell, L.D. & Carr, W.W. 1991. Using radio waves to eradicate *Bursaphelenchus xylophilus* in southern pine chips. (Abstract). *J. Nematol.* 23:527.

Dwinell, L.D. & Carr, W.W. 1995. Radio waves and steam, alone or in combination, for the eradication of *Bursaphelenchus xylophilus* in southern pine chips. Ann. Intl. Res. Conf. on Methyl Bromide Alternatives and Emissions Reductions, San Diego, CA, Nov. 6-8, 1995. p. 81-1,3.

Dwinell, L.D., Avramidis, S. & Clark, J.E.. 1994. Evaluation of a radio-frequency/vacuum dryer for the eradication of the pine wood nematode in green sawn wood. *Forest Prod. J.* 44: 19-24.

Dwinell, L.D., Magnusson, C. & Tomminen, J. 1994. Evaluation of a Swedish steam-dryer for the eradication of *Bursaphelenchus xylophilus* in pine chips. *EPPO Bulletin* 24: 805-11.

Dwinell, L.D., Chung, Y., Lee, D., & Yi, C. 1995. Heat-treating loblolly pine lumber to eradicate *Bursaphelenchus xylophilus*: verification tests. Ann. Intl. Res. Conf. on Methyl Bromide Alternatives and Emissions Reductions, San Diego, CA, Nov. 6-8, 1995. p. 80-1,3.

EOLAS, Irish Science and Technology Agency. 1991. The development of treatment schedules to ensure eradication in timber of the pinewood nematode (*Bursaphelenchus xylophilus*)) and its insect vectors. Final Report, ELOAS, Glasnevin, Dublin.

Forest Products Research Laboratory. 1957. The kiln sterilization of *Lyctus*-infested timber. Leaflet 13. Dept. Sci. and Ind. Res., For. Prod. Res. Lab., Princes Risborough, UK, 4pp.

French, J.R.R. & Johnstone, R.S. 1968. Heat sterilization of block stacked timber in wood-destroying insect control. *J. Inst. Wood Sci.* 20: 42-46.

Garg, A.P., McCarthy, A.J. & Roberts, J.C. 1996. Biobleaching effect of *Streptomyces thermoviolaceus* xylanese preparations on birchwood kraft pulp. *Enzyme microbial technology* 18: 261-67.

Graham, S.A. 1924. Termperature as a limiting factor in the life of subcortical insects. *J. Econ. Entomol.* 17: 377-83.

Guilmo, S.M.P., Auer, C.G. & Barrichelo, L.E.G. 1999. Effect of thermophilic fungi on wood of Eucalyptus saligna. III. The fungal population. *Boletim-de-Pesquisa-Florestal* 37: 89-95.

Hamid. M.A.K., Kashyap, C.S., & Van Cauwenberghe, R. 1968. Control of grain insects by microwave power. *Journal of Microwave Power* 3(3): 126-27.

Heald, C.M. & Wayland, J.R. 1975. Factors affecting control of *Rotylenchus reniformis* with UHF electromagnetic energy. *J. Nematol.* 7(2): 171-74.

Hightower, N.C., Burdette, E.C. & Burns, C.P. 1974. Investigation of the use of microwave energy for weed seed and wood products insect control. Tech. Rep., Project E-230-901. Atlanta, GA: Georgia Institute of Technology. 53pp.

Hopping, G.R. & Jenkins, J.H. 1933. The effect of kiln temperatures and air-seasoning on ambrosia insects (pinworms). *Can. Dept. Interior For. Serv. Circ.* 38.

Humphreys, C.J. & Siggers, P.V. 1934. Termperature relations of wood-destroying fungi. *J. Agric. Res.* 47: 997-1008.

Jones, T.W. 1973. Killing the oak wilt fungus in logs. *For. Prod. J.* 23(11): 52-54.

Kappenburg, K.W. 1998. Evaluierung alternativier quarantänetechniken zum ersatz von methylbromid bei der behandlung nordamerikanischen eichenholzes. Inauguraldissertation zur erlanung der Doktorwürde. U. Freiburg in Breisgau. 140pp.

Khristov, A. 1984. Peach violet mosaic. *Gradinarska-I-Lozarska-Nauka* 21(8): 24-30.

Kinn, D.N. 1986. Heat-treating wood chips: a possible solution to pine wood nematode contamination. *Tappi Journal* 69(1): 97-98.

Koch, P. 1972a. Utilization of the southern pines. I. The raw material. *USDA Forest Service Agricultural Handbook* No. 420. 733 pp.

Koch, P. 1972b. Utilization of southern pines. II. Processing. *USDA Forest Service Agricultural Handbook* No. 420. 926 pp.

Lewis, R., Jr. 1985. Temperature tolerance and survival of Cf in Texas. *Plant Dis.* 69: 443-4.

Lin, M.T., Kitajima, E.W., Cupertino, F.P., & Costa, C.L. 1977. Partial purification and some properties of bamboo mosaic virus. *Phytopathology* 67(12): 1439-43.

Lindgren, R.M. 1942. Temperature, moisture and penetration studies of wood staining *Ceratostomellae* in relation to their control. *USDA Tech. Bull.* 807.

MacLean, J.D. 1930. Studies of heat conduction in wood: results of steaming green round southern pine timbers. *Proc. American Wood-Preservers' Assoc.* 26: 197-217.

MacLean, J.D. 1932. Studies of heat conduction in wood, part II: results of steaming green sawn southern pine timbers. *Proc. American Wood-Preservers' Assoc.* 28: 303-329.

Martignoni, M.E. & Iwai, P.J. 1977. Thermal inactivation characteristics of two strains of nucleopolyhedrosis virus (Baculovirus subgroup A) pathogenic for *Orgyia pseudotsugata*. *J. of Invertebrate-Path.* 30(2): 255-62.

Miric, M. & Willeitner, H. 1984. Lethal temperature for some wood-destroying fungi with respect to eradication by heat treatment. Doc. No. IRG/WP/1229. Inter. Res. Group on Wood Preservation. Stockholm, Sweden. 8 pp.

Morrell, J.J. 1995. Importation of unprocessed logs into North America: a review of pest mitigation procedures and their efficacy. *Forest Products J.* 45: 41-49.

Morrell, J.J. 1996. Methods for mitigating the risks associated with unprocessed wood into the United States. Importing Wood Products: Pest Risks to Domestic Industries, Portland, OR, March 4-6, 1996. p.27-32.

Newbill, M.A. & J.J. Morrell. 1991. Effects of elevated temperatures on the survival of Basidiomycetes that colonize untreated Douglas-fir logs. *Forest Products J.* 41: 31-33.

Novak, J.B. & Lanzova, J. 1981. Cherry leaf roll virus from walnut (*Juglans regia*) in Czechoslovakia. *Sbornik UVTIZ Ochrana Rostlin* 17(1): 1-8.

Ostaff, D.P. & Cech, M.Y. 1978. Heat sterilization of spruce-pine-fir lumber containing pine sawyer beetle larvae (Coleoptera: Cerambycid) *Monochamus* sp. Rep. OPX-200E. Canadian Forest Service. Ottawa, ON, Canada. 9 pp.

Ostaff, D.P. & Shields, J.K. 1978. Reduction of losses to logs and lumber caused by wood-boring insects. Rep. OPX218E. Canadian Forest Service, Eastern Forestry Products Laboratory. Ottawa, ON, Canada. 15pp.

Parkin, E.A. 1937. The kiln-sterilization of timber infested by *Lyctus* powder-post beetles. *J. Forestry* 11: 32-39.

Rasmussen, E.P. 1961. Dry kiln operator's manual. *Agric. Handb.* 188. Washington, DC: U.S. Department of Agriculture, Forest Service. 197pp.

Reddick, B.B., Barnett, O.W., & Baxter, L.W. Jr. 1979. Isolation of cherry leafroll tobacco ringspot, and tomato ringspot viruses from dogwood trees in South Carolina. *Plant disease reporter* 63(7): 529-32.

Schmelzer, K. 1964. Notes on the mosaic disease of poplar. *Arch. Forstw.* 13(8): 787-98.

Seehan, G. 1965. Über die wirkung einer trocknung und erwanrmang von nädelholz auf das wachstum von blauepilzen. *Holz Roh u. Werkstoff* 23: 341-47.

Seifert, K.A. 1993. Sapstain of commercial lumber. *In* Wingfield, M.J., Seifert, K.A., & Weber, J.F., eds. *Ceratocystis and Ophiostoma, taxonomy, ecology and pathogenicity*. St. Paul, MN: APS Press. 293pp.

Semeniuk, G. & Carmichael, J.W. 1966. *Sporotrickum thermophile* in North America. *Can. J. Bot.* 44:105-8.

Smith, R.S. (ed.). The use of heat treatment in the eradication of the pinewood nematode and its vectors in softwood lumber. Report to the Task Force on pasteurization of Softwood Lumber. Forintek Canada Corporation, Vancouver, B.C., Canada. 72 pp.

Snyder, T.E. 1923. High temperatures as a remedy for *Lyctus* powder-post beetles. *J. Forestry* 21: 810-14.

Snyder, T.E. & St. George, R.A. 1924. Determination of temperature fatal to the powderpost beetle, *Lyctus planicollis* LeConte, steaming infested ash and oak lumber in a kiln. *J. Agric. Res.* 28(10): 1033-38.

Srivastava, S.K. & Patel, P.N. 1970. Epidemiology of bacterial leaf spot, blight and shot-hole disease of Neem in Rajastan. *Indian Phytopathology*, New Dehli 1069(22): 237-44.

Stalpers, J.A.1978. Identification of wood-inhabiting aphyllophorales in pure culture. *Studies in Mycology* 16. 248pp.

Tansey, M.R. 1971. Isolation of thermophilic fungi from self-heated, industrial wood chip piles. *Mycologia*, May/June 1971. 63(3): 537-47.

Thomas, A.M. & White, M.G. 1959. The sterilization of insect infested wood by high frequency heating. *Wood* 24: 407-10ff.

Tomminen, J. & Nuorteva, M. 1992. Pinewood nematode, *Bursaphelenchus xylophilus*, in commercial sapwood and its control by kiln-heating. *Scandinavian Journal of Forest Research* 7: 113-20.

U.S. Environmental Protection Agency. 1996. Heat treatment to control pests on imported timber. Methyl bromide alternative case study, 10 Case Studies, Volume 2. 7 http://www.epa.gov/spdpublc/mbr/heatlog2.html

USDA Animal and Plant Health Protection Service. 1991. An efficacy review of control measures for potential pests of imported Soviet timber. Misc. Publication No. 1496. 28 pp.

USDA Forest Service. 1951. Chemical brown stain in pine. USDA Forest Service, Forest Products Laboratory, Technical Note 254. 3 pp.

USDA Forest Service. 1991. Dry kiln operator's manual. USDA Forest Service, Forest Products Laboratory, *Agriculture Handbook* No. 188. 274 pp.

Wilcox, W.W. 1973. Degradation in relation to wood structure. *In* D.D. Nicholas, ed. *Wood Deterioration and its Prevention by Preservative Treatments*. Vol. 1, p. 107-48. Syracuse, NY: Syracuse University Press. 380pp.

Zhang, Z.Y., Xu, Z.Y., Chen, K.R., Chen, J.X., & Yang, S.J. 1990. A preliminary study on an isolate of peanut stunt virus from black locust mosaic tree. *Chinese journal of virology* 6(4): 380-82.

Zimmerman, G. & Butin, H. 1973. Untersuchengen ueber Hitzeund Trockenresistenz holzwohenender Pilz. *Flora(Jena)* 162: 393-419.

METHYL BROMIDE

Anonymous. 1947. Methyl bromide speeds ship fumigation. *Down to earth* 3(3): 10-11.

Animal and Plant Health Inspection Service. 1985. Plant protection and quarantine treatment manual. Washington, DC: U.S. Department of Agriculture, Animal and Plant Health Inspection Service: Sec. 3, pt. 6.

Harris, E.C. 1963a. Methyl bromide fumigation for wood-boring insects. *International pest control* 5(4): 15-18.

Harris, E.C. 1963b. Methyl bromide fumigation and wood-boring insects. *In, Proceedings of the annual convention of the British Wood Preservation Association* London [Place of production and publisher unknown.] 17pp.

Liese, W. & Ruetze, M. 1985. Development of a fumigation treatment of oak logs against *Ceratocystis fagacearum*. *European Plant Protection Organization Bulletin* 15(1): 29-36.

Michelsen, A. 1964. Diffusion of methyl bromide into pine wood during fumigation against *Hylotrupes bajulus*. *Holzforschung und Holzverwertung* 16: 66-71.

Munro, H.A.U. 1969a. Manual of fumigation for insect control. Fome: Food and Agriculture Organization of the United Nations: 121.

Munro, H.A.U. 1969b. Insect pests in cargo ships. Publ. 855. Ottawa, ON: *Agriculture Canada*. 39pp.

National Pest Control Association. 1972. Good practices in ship fumigation. *Tech. Rel.* 18-72. Vienna, USA: National Pest Control Association. 10pp.

Ricard, J.L., See, T.E. & Bollen, W.B. 1968. Control of incipient decay with gases in Douglas-fir poles. *Forest Products J.* 18(4): 45-51.

Slobodnik, M. 1962. Fumigating ships in harbor. *Pest Control* (July): 30-32ff.

Yu, K.Y., Chung, Y.W., Lee, H.H., & Jae, J.W. 1984. Study on shipboard fumigation of the imported logs. *Korea Journal of Plant Protection* 23(1): 37-41. [In Korean, English summary]

DRAFT STANDARD
MAY 2001
ISC-2001-1

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

PEST REPORTING

Secretariat of the International Plant Protection Convention
Food and Agriculture Organization
of the United Nations
Rome, 200-

INTRODUCTION

SCOPE

This standard describes the responsibilities of and requirements for contracting parties in reporting:

- the occurrence, outbreak and spread of pests
- pest status, including:
  - successful eradication and
  - establishment of pest free areas.

REFERENCES

Determination of pests status in an area, 1998. ISPM Pub. No. 8, FAO, Rome.
Glossary of phytosanitary terms, 1999. ISPM Pub. No. 5, FAO, Rome.
Guidelines for pest eradication programmes, 1999. ISPM Pub. No.9, FAO, Rome.
Guidelines for pest risk analysis, 1996. ISPM Pub. No. 2, FAO, Rome.
Guidelines for surveillance, 1998. ISPM Pub. No. 6, FAO, Rome.
New Revised Text of the International Plant Protection Convention, 1997. FAO, Rome.
Pest risk analysis for quarantine pests, 2001. ISPM Pub. No. 11, FAO, Rome.
Requirements for the establishment of pest free areas, 1996. ISPM Pub. No. 4, FAO, Rome.

DEFINITIONS AND ABBREVIATIONS[1]

Area	An officially defined country, part of a country or all or parts of several countries
Commodity	A type of plant, plant product or other article being moved for trade or other purpose
IPPC	International Plant Protection Convention, as deposited in 1951 with FAO in Rome and as subsequently amended
NPPO	National Plant Protection Organization
Occurrence*	The presence in an area of a pest officially recognized to be indigenous or introduced and/or not officially reported to have been eradicated
Official	Established, authorized or performed by a National Plant Protection Organization
Outbreak*	An isolated, recently detected pest population
Pest	Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products
Pest categorization*	The process for determining whether a pest has or not the characteristics of a quarantine pest or those of a regulated non-quarantine pest
Pest risk analysis	The process of evaluating biological or other scientific

[1] Terms marked with an (*) are new or revised

	and economic evidence to determine whether a pest should be regulated and the strength of measures to be taken against it
Pest status (in an area)	Presence or absence, at the present time, of a pest in an area, including where appropriate its distribution, as officially determined using expert judgement on the basis of current and historical pest records and other information
Phytosanitary action	An official operation such as inspection, testing, surveillance or treatment, undertaken to implement phytosanitary regulations or procedures
Phytosanitary measure	Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests
Phytosanitary procedure	Any officially prescribed method for implementing phytosanitary regulations including the performance of inspections, tests, surveillance or treatments in connection with regulated pests
Phytosanitary regulation	Official rule to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests, including establishment of procedures for phytosanitary certification
Quarantine pest	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled
Regulated article	Any plant, plant product storage place, packaging, conveyance, container, soil and any other organism, object or material capable of harboring or spreading pests, deemed to require phytosanitary measures, particularly where international transportation is involved
Regulated non-quarantine pest	A non-quarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party
Regulated pest	A quarantine pest or a regulated non-quarantine pest
Spread	Expansion of the geographical distribution of a pest within an area
Surveillance	An official process which collects and records data on pest occurrence or absence by survey, monitoring or other procedures
Survey	An official procedure conducted over a defined period of time to determine the characteristics of a pest population or to determine which species occur in an area

OUTLINE OF REQUIREMENTS

The New Revised Text of the IPPC requires countries to report on the occurrence, outbreak and spread of pests with the purpose to communicate immediate or potential danger. National plant protection organizations (NPPOs) have the responsibility to collect pest information by surveillance and to verify the pest records thus collected. Occurrence, outbreak or spread of pests that are known, on the basis of observation, previous experience or PRA, to be of immediate or potential danger should be reported to other countries, in particular to neighbouring countries and trading partners. Reports of successful eradication and the establishment of pest free areas should also be provided. Pest reports should contain information on the identity of the pest, location, pest status and nature of the immediate or potential danger. They should be provided without undue delay, preferably through electronic means, through direct communication, openly available publication and/or the International Phytosanitary Portal (IPP)[2].

[2] The IPP is the electronic mechanism provided by the IPPC Secretariat to facilitate the exchange of official phytosanitary information (including pest reporting) between NPPOs, RPPOs, and/or the IPPC Secretariat.

REQUIREMENTS

1. Background

The New Revised Text of the IPPC, in relation to its main purpose of *securing common and effective action to prevent the spread and introduction of pests of plants and plant products,* (Article I.1) requires countries *to make provision, to the best of their ability, for an official national plant protection organization,* (Article IV.1) whose responsibilities include the following:

*…the surveillance of growing plants, including both areas under cultivation (*inter alia *fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a) (Article IV.2b).*

Countries are responsible for the distribution of information within the territory regarding regulated pests (Article IV.3a), and they are required, *to the best of their ability, to conduct surveillance for pests and develop and maintain adequate information on pest status in order to support categorization of pests, and for the development of appropriate phytosanitary measures. This information shall be made available to contracting parties, on request.* (Article VII.2j). They are required to *designate a contact point for the exchange of information connected with the implementation* of the IPPC (Article VIII.2).

With these systems in operation, countries are able to fulfil the requirement under the IPPC: *…to cooperate with one another to the fullest practicable extent in achieving the aims of this Convention* (Article VIII.1), and in particular to *cooperate in the exchange of information on plant pests, particularly the reporting of the occurrence, outbreak or spread of pests that may be of immediate or potential danger, in accordance with such procedures as may be established by the Commission* (Article VIII.1a).

2. Purpose of Pest Reporting

The main purpose of pest reporting is to communicate immediate or potential danger.

The provision of reliable and timely pest reports confirms the operation of effective surveillance and reporting systems within countries.

Pest reporting enables countries to adjust their phytosanitary requirements and actions to take account of changes in risk and provides useful current and historical information for operation of phytosanitary systems. Accurate information on pest status facilitates technical justification of measures and helps to minimize interference with trade. Every country needs pest reports for these purposes, and can only obtain them by the cooperation of other countries. It should be emphasized that countries should not overreact to pest reports. The phytosanitary measures that are taken should be commensurate with the risk and technically justified.

3. National Responsibilities

Countries should have in place systems to ensure the collection, verification and analysis of domestic pest reports.

3.1 Surveillance

Pest reporting depends on the establishment within countries of national systems for surveillance, as required by the New Revised Text of the IPPC (Article IV.2b). Information for pest reporting may be derived from either of the two types of pest surveillance systems defined in ISPM No. 6 (*Guidelines for surveillance*), general surveillance or specific surveys. Systems should be put in place to ensure that such information is passed to and collected by the NPPO. The surveillance and collection systems should operate on an ongoing and timely basis. Surveillance should be conducted in accordance with ISPM No. 6.

3.2 Sources of information

Information for pest reporting may be obtained directly by the NPPO or may be available to the NPPO from a variety of other sources (research institutions and journals, Internet Websites, growers and their journals, etc). General surveillance by the NPPO includes the review of information from other sources. This may be information brought to the attention of NPPOs by other countries.

3.3 Verification and analysis

NPPOs should put in place systems for verification of domestic pest reports from official and other sources (including those brought to their attention by other countries). This should be done by confirming the identification of the pest concerned and making a preliminary determination of its geographical distribution, and thus establishing its "pest status" in the country, according to ISPM No. 8 (*Determination of pest status in an area*). They should also put in place systems of Pest Risk Analysis (PRA) to determine whether new or unexpected pest situations constitute an immediate or potential danger to the reporting country, requiring phytosanitary action. PRA may also be used to identify, as appropriate, whether the situations that have been reported may be of concern to other countries.

3.4 Motivation for reporting

Where possible, countries should provide incentives for domestic reporting. Growers and others may be officially required to report on new or unexpected pest situations and be encouraged in this by rewards for reporting or penalties for not reporting, and/or compensation for actions that may be taken as a result of reporting.

4. Reporting Obligations

The obligation identified under the IPPC is to report the occurrence, outbreak and spread of pests that may be of immediate or potential danger. Countries may optionally make other pest reports. Such reporting satisfies the general recommendation under the IPPC to cooperate in achieving the objectives of the Convention but is not a specific obligation. This Standard considers all cases of pest reporting.

4.1 Immediate or potential danger

An immediate danger is considered to be one that has already been identified (pest already regulated) or is obvious on the basis of observation or previous experience. A potential danger is one that is identified as the result of a PRA. Both immediate and potential danger to the reporting country normally lead to phytosanitary action or emergency action by the reporting country.

The occurrence, outbreak and spread of pests which is of immediate or potential danger to the reporting country may be of immediate or potential danger to other countries. There is an obligation to report it to other countries.

Countries have an obligation to report occurrence, outbreak or spread of pests that are not of danger to them but are known, on the basis of information available to them, to be of immediate danger to other countries. This will normally concern only neighbouring countries and trading partners (for relevant pathways).

Countries may also, as appropriate, use the same reporting systems to provide pest reports on other pests, or to report to other countries, if this contributes usefully to the exchange of information on plant pests foreseen under Article VIII of the IPPC. They may also enter into bilateral or multilateral agreements on pest reporting, e.g. through RPPOs.

4.2 Reporting of changed status or absence

Countries may also report cases where immediate or potential danger has changed or is absent (including in particular pest absence). Where there has been an earlier report indicating immediate or potential danger and it later appears that the report was incorrect or circumstances change so that the risk changes or disappears, countries should report the change. Countries may also report that all or part of their territory has been categorized as a pest free area, according to ISPM No. 4 (*Requirements for the establishment of pest free areas*), or report successful eradication according to ISPM No. 9 (*Guidelines for pest eradication programmes*), or changes in the status of a pest according to one of the descriptions in ISPM No. 8 (*Determination of pest status in an area*).

4.3 Reporting of pests in imported consignments

Reporting the pests detected in imported consignments is covered by the ISPM No. 13 (*Guidelines for the notification of non-compliance and emergency action*) and not by this Standard.

5. Initiation of Reports

Pest reports are initiated by the occurrence, outbreak or spread of pests, or successful eradication, or any other new or unexpected pest situation.

5.1 Occurrence

- Occurrence should normally be reported where the presence of the pest is newly determined, which is known to be regulated by neighbouring countries or trading partners (for relevant pathways).

5.2 Outbreak

An outbreak concerns a recently detected pest. It should be reported when its presence corresponds at least to the status of **Transient: actionable** in ISPM No 8.

The term outbreak also applies to an unexpected situation associated with an established pest, which results in new pathways, or which results in a significant increase in risk to neighbouring countries or trading partners.

5.3 Spread

Spread concerns an established pest that expands its geographical distribution, resulting in a significant increase in risk to the reporting country, neighbouring countries or trading partners.

5.4 Successful eradication

Eradication may be reported when it is successful, i.e. when an established or transient pest has been eliminated from an area and the absence of that pest has been verified.

5.5 Establishment of pest free area

The establishment of a pest free area may be reported where this constitutes a change in the pest status in that area.

6. Pest Reporting

6.1 Content of reports

A pest report should clearly indicate:

- the identity of the pest with scientific name (at species level or below)
- the date of the report
- host(s) or articles concerned (as appropriate)
- the status of the pest under ISPM No. 8
- geographical distribution of the pest (including a map, if appropriate)
- the nature of the immediate or potential danger, or other reason for reporting.

It may also indicate the phytosanitary measures applied or required, and any other information as indicated for pest records in ISPM No. 8.

6.2 Timing of reporting

Official pest reports should be provided without undue delay. It is recognized that the operation of the national systems for surveillance and reporting (see above), and in particular the processes of verification and analysis, require a certain time, but this should be kept to a minimum.

6.3 Destination of reports

Pest reports which are obligations under the IPPC should be made by at least one of the three following systems:

- direct communication to countries, through official contact points (mail or e-mail)
- publication on an openly available national Website (such a Website may be designated as part of an official contact point)
- the International Phytosanitary Portal (IPP).

Countries may also address pest reports to RPPOs, to privately contracted reporting systems, through bilaterally agreed reporting systems, or in any other way, according to such arrangements as they choose to make. Whatever reporting system is used, and whatever intermediaries are involved, the NPPO should still retain responsibility for the reports.

6.4 Good reporting practices

Countries should follow the "good reporting practices" set out in ISPM No. 8.

6.5 Confidentiality

National systems for surveillance, domestic reporting, verification and analysis may contain confidential information. Pest reports should not be confidential.

Countries may have in place requirements regarding confidentiality of certain information, e.g. identity of growers. National requirements should not affect basic reporting obligations (content of reports, timeliness).

Confidentiality in bilateral arrangements should not conflict with basic reporting obligations.

6.6 Language

There are no IPPC obligations in relation to the language used for pest reporting, except where countries request information under Article VII.2j, when one the five official languages of FAO should be used for the reply. Countries are encouraged to provide pest reports in English, in particular for purposes of global electronic reporting.

7. Mechanism of Pest Reporting

Countries are encouraged to use electronic means of pest reporting to facilitate wide and timely distribution of information. In addition to the IPP, they are encouraged to use Websites for communication of information to all countries. For pests of known immediate danger to other countries, direct communication to concerned countries (letter, e-mail) is recommended in addition.

If a Website is used, precise information on the path for access to pest reports should be made available to other countries, or at least to the IPPC Secretariat.

Publication of pest reports in a scientific journal, or in an official journal or gazette, does not meet the requirements of this standard.

8. Additional Information

On the basis of pest reports, countries may request additional information through official contact points. Information required under Article VII.2j should, to the best of its ability, be supplied by the reporting country.

9. Review

NPPOs should undertake periodic review of their pest surveillance and reporting systems to ensure that they are meeting their reporting obligations and to identify possibilities for improving reliability and timeliness. They should make adjustments as appropriate.

10. Documentation

National pest surveillance and reporting systems should be adequately described and documented and this information should be made available to other countries on request (see ISPM No. 6: *Guidelines for surveillance*).

DRAFT STANDARD
MAY 2001
ISC-2001-1

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

INTEGRATED MEASURES FOR PEST RISK MANAGEMENT (SYSTEMS APPROACHES)

Secretariat of the International Plant Protection Convention
Food and Agriculture Organization
of the United Nations
Rome, 200-

INTRODUCTION

SCOPE

This standard provides guidelines for the development and evaluation of integrated measures for pest risk management designed to meet phytosanitary requirements for the import of plants, plant products and other regulated articles – procedures known as systems approaches.

REFERENCES

Glossary of phytosanitary terms, 1999. ISPM Pub. No. 5, FAO, Rome.
Guidelines for an integrated system of measures to mitigate pest risk (systems approach), 1998. V 1.2. COSAVE, Asuncion, Paraguay.
Guidelines for pest risk analysis, 1996. ISPM Pub. No. 2, FAO, Rome.
Hazard analysis and critical control point system and guidelines for its application, annex to the recommended international code of practice - general principles of food hygiene, 1969 (Revised 1997). Codex Alimentarius, FAO, Rome.
New Revised Text of the International Plant Protection Convention, 1997. FAO, Rome.
Pest risk analysis for quarantine pests, 2001. ISPM Pub. No. 11, FAO, Rome.
Principles of plant quarantine as related to international trade, 1995. ISPM Pub. No. 1, FAO, Rome.
Requirements for the establishment of pest free areas, 1996. ISPM Pub. No. 4, FAO, Rome.

DEFINITIONS AND ABBREVIATIONS[1]

Area	An officially defined country, part of a country or all or parts of several countries
Commodity	A type of plant, plant product or other regulated article being moved for trade or other purpose
Compliance*	Accordance with stated requirements or known obligations
Consignment	A quantity of plants, plant products and/or other regulated articles being moved from one country to another and covered by a single phytosanitary certificate (a consignment may be composed of one or more lots)
Control point*	A step in a system where specific procedures can be applied to achieve a defined effect and can be measured, monitored, controlled and corrected
Country of origin (of a consignment of plant products)	Country where the plants from which the plant products are derived were grown
Country of origin (of a consignment of plants)	Country where the plants were grown
Country of origin (of regulated articles	Country where the regulated articles were first exposed

[1] Terms marked with an (*) are new or revised

other than plants and plant products)	to contamination by pests
Entry (of a pest)	Movement of a pest into an area where it is not yet present, or present but not widely distributed and being officially controlled
Establishment	Perpetuation, for the foreseeable future, of a pest within an area after entry
Introduction	The entry of a pest resulting in its establishment
IPPC	International Plant Protection Convention, as deposited in 1951 with FAO in Rome and as subsequently amended
Lot	A number of units of a single commodity , identifiable by its homogeneity of composition, origin, etc., forming part of a consignment
National Plant Protection Organization	Official service established by a government to discharge the functions specified by the IPPC
NPPO	National Plant Protection Organization
Official	Established, authorized or performed by a National Plant Protection Organization
Pathway	Any means that allows the entry or spread of a pest
Pest	Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products
Pest risk analysis	The process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary measures to be taken against it
Pest risk assessment (for quarantine pests)	Evaluation of the probability of the introduction and spread of a pest and of the associated potential economic consequences
Pest risk management (for quarantine pests)	Evaluation and selection of options to reduce the risk of introduction and spread of a pest
Phytosanitary measure*	Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests
Phytosanitary procedures	Any officially prescribed method for implementing phytosanitary regulations including the performance of inspections, tests, surveillance or treatments in connection with regulated pests
Phytosanitary regulation	Official rule to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests, including establishment of procedures for phytosanitary certification

Post-entry quarantine	Quarantine applied to a consignment after entry
PRA	Pest Risk Analysis
PRA area	Area in relation to which a pest risk analysis is conducted
Prohibition	A phytosanitary regulation forbidding the importation or movement of specified pests or commodities
Quarantine pest	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled
Spread	Expansion of the geographical distribution of a pest within an area
Systems approach(es)*	The integration of different pest risk management measures, at least two of which act independently, and which cumulatively achieve the desired level of phytosanitary protection
Test	Official examination, other than visual, to determine if pests are present or to identify pests
Treatment	Officially authorized procedure for the killing, removal, or rendering infertile of pests

OUTLINE OF REQUIREMENTS

Integrated measures for pest risk management, also known as systems approaches, provide an alternative to single measures to achieve a level of phytosanitary protection in an importing country. A systems approach requires the integration of different measures, at least two of which act independently, with a cumulative effect. Options for measures may be selected from a range of pre- and post harvest measures and include measures to compensate for uncertainty.

Systems approaches range in complexity. The application of a control points system is useful to identify and evaluate points in a pathway where pest risks can be reduced and monitored. The development and evaluation of a systems approach may use quantitative or qualitative methods. Exporting and importing countries should consult and cooperate in the development and implementation of a systems approach. The decision regarding the acceptability of systems approach lies with the importing country.

REQUIREMENTS

1. Purpose and Characteristics of Systems Approaches

A systems approach integrates pest risk management measures to achieve the level of phytosanitary protection required by the importing country. Systems approaches provide, where appropriate, an alternative to single procedures or more restrictive measures such as prohibition by considering the combined effect of different conditions and procedures. It provides the opportunity to consider both pre- and post harvest procedures that may contribute to the effective management of pest risk. It is important to consider systems approaches among risk management options because the integration of measures may be less trade restrictive than other risk management options (particularly where the alternative is prohibition).

A systems approach requires two or more measures that are independent of each other, and may include any number of measures that are dependent on each other. An advantage of the systems approach is the ability to address variability and uncertainty by modifying the number and strength of measures to provide the desired level of protection and confidence.

Measures that may be required in a systems approach can occur pre- and/or post harvest wherever NPPOs have the ability to oversee and ensure compliance with official phytosanitary procedures. Thus a systems approach may include measures applied in the place of production, during the post harvest period, at the packinghouse, or during shipment and distribution of the commodity.

Cultural practices, field treatment, post harvest disinfestation, inspection and other procedures may be integrated in a systems approach. Risk management measures designed to prevent contamination or re-infestation are generally included in a systems approach (e.g. maintaining the integrity of lots, requiring pest-proof packaging, screening packing areas, etc.). Likewise, procedures such as pest surveillance, trapping and sampling can also be components of a systems approach.

Measures that do not kill pests or reduce their prevalence but reduce their potential for entry or establishment can be important elements of a systems approach. Examples include designated harvest or shipping periods, restrictions on the maturity, color, hardness or other condition of the commodity, the use of resistant hosts, and limited distribution at the destination.

2. Relationship with PRA and Available Management Options

The conclusions from pest risk assessment are used to decide whether risk management is required and the strength of measures to be used (Stage 2 of PRA). Pest risk management, (Stage 3 of PRA), is the process of identifying ways to react to a perceived risk, evaluating the efficacy of these procedures, and recommending the most appropriate options.

A combination of pest risk management options in a systems approach, may be selected as the basis for import requirements corresponding to the level of protection required by the importing country. As in the development of all pest risk management procedures, the measures should take into account uncertainty. (see ISPM No. 11: *Pest risk analysis for*

quarantine pests) Systems approaches may require the incorporation of compensatory measures to allow for compounded uncertainty that arises from the use of multiple measures.

The following summarizes many of the options from the range of pre- and post harvest measures commonly used:

Pre-harvest

- field certification/management (e.g. pre-harvest treatments, biocontrol, etc.)
- protected conditions (e.g. glasshouse, fruit bagging, etc.)
- resistant or less susceptible cultivars
- harvesting plants at a specific stage of development or time of year
- pest mating disruption
- pesticide application
- cultural controls
- pest free areas, places or sites of production
- low pest prevalence (continuous or at specific times)
- testing

Harvest

- removal of infested products, inspection for selection
- stage of ripeness/maturity
- timing of harvest
- sanitation (e.g. removal of contaminants, “trash”)
- harvest technique (e.g. handling)

Post harvest treatment and handling

- treatment to kill, sterilize or remove pests (e.g. fumigation, irradiation, cold storage, controlled atmosphere, washing, brushing, waxing, dipping, heat, etc.)
- inspection and grading (including selection for certain maturity stages)
- sanitation (including removal of parts of the host)
- certification of packing facilities
- sampling
- testing

Shipping and distribution

- in transit or on arrival treatment or processing
- restrictions on end use, distribution and periods and ports of entry
- post entry quarantine
- inspection and/or testing
- speed and type of transport
- sanitation (freedom from contamination of conveyances).

3. Dependent and Independent Measures

A systems approach may be composed of independent and dependent measures. Independent measures are those that act alone to reduce pest risk. Dependent measures require effective implementation of another or other measures.

Example: Fruit may be sampled to determine that the infestation rate does not exceed a specific level as a prerequisite for fumigation. Sampling and fumigation are in this case two dependent measures. Neither measure achieves the desired level of efficacy without the other. However, the combination of sampling and fumigation constitute one independent measure. Note that fumigation may also stand alone as an independent measure where it is not essential to determine a threshold infestation rate in advance of treatment.

4. Circumstances for Use

Systems approaches should be considered when:

- a single procedure is:
  - not adequate to meet the level of phytosanitary protection required by the importing country
  - not available (or likely to become unavailable)
  - detrimental (to commodity, human health, environment)
  - not cost effective
  - overly trade restrictive
  - not feasible
- the pest and pest-host relationship is well known, or a systems approach has been demonstrated to be effective for a similar pest/commodity situation
- there is the possibility to assess the effectiveness of individual measures either qualitatively or quantitatively
- growing, harvesting, packing, transportation and distribution practices are well-known and standardized
- individual measures can be monitored and corrected
- prevalence of the pest(s) is known and can be monitored
- a systems approach is cost effective considering the value and/or volume of commodity.

5. Types of Systems Approaches

Systems approaches range in complexity and rigor from systems that simply combine independent measures known to be effective to more complex and precise systems such as a system that may be developed according to Hazard Analysis Critical Control Point (HACCP) requirements that are well known and widely practiced in food safety. A formal HACCP system adheres strictly to the requirements of the HACCP model as follows:

1. determine the hazards and the objectives for measures within a defined system
2. identify independent procedures that can be monitored and controlled
3. establish criteria or limits for the acceptance/failure of each independent procedure
4. implement the system with monitoring as required for the desired level of confidence
5. take corrective action when monitoring results indicate that criteria are not met
6. review or test to validate system efficacy and confidence.

Although it is unlikely that the formal HACCP system will be used for phytosanitary purposes, the application of a HACCP approach is useful to identify and evaluate hazards and the points in a pathway where risks can be reduced and monitored. The use of HACCP procedures for phytosanitary purposes does not imply or prescribe that application of controls to all risk points identified is necessary.

5.1 Control point systems

Control point systems which include HACCP systems rely on specific independent procedures known as control points. These are defined risk management procedures whose contribution to the efficacy of the system can be measured and controlled.

Systems approaches are typically control point systems based on a HACCP approach to assist their development and evaluation. However, they may include components that do not need to be consistent with HACCP because they are considered to be important elements in a systems approach for phytosanitary purposes. For example, certain measures or conditions exist or are included to compensate for uncertainty. These may not be monitored as independent procedures (e.g. packhouse sorting), or may be monitored but not controlled (e.g. host preference/susceptibility).

5.2 Other systems

Other systems based on a combination of measures that do not meet the requirements for HACCP may be considered effective. However, the application of the HACCP concept is generally useful for the development of other systems approaches. For example, quality certification programmes may have elements that are also valuable as risk management measures and may be included in a systems approach provided the phytosanitary elements of the process are made mandatory and can be overseen and controlled by the NPPO.

The minimum requirements for a measure to be considered a required component for a systems approach are that the measure:

- is clearly defined
- has a known level of efficacy
- is officially required (mandatory)
- can be overseen and controlled by the responsible NPPO.

6. Methods for Assessing the Efficacy of Measures

The development or evaluation of a systems approach may use quantitative and/or qualitative methods. Quantitative methods for evaluating the efficacy of measures may be appropriate where suitable data are available. In other instances, qualitative methods may be more suitable. For example, quantitative methods are usually used for determining the efficacy of treatments but a qualitative assessment may be considered more appropriate where efficacy is based on expert opinion.

The efficacy of independent measures that may be used to reduce pest risk can be expressed in different ways (e.g. mortality, reduction in prevalence, host susceptibility). The overall efficacy of a systems approach is based on the combination of the efficacy of required independent measures. Wherever possible this should be expressed in quantitative terms with a confidence interval. For example, efficacy for a particular situation may be determined to be no more than five infested fruit from a total population of one million fruit with 95% confidence. Where such calculations are not possible or are not done, the efficacy may be expressed in qualitative terms such as high, medium, and low.

7. Developing System Approaches

The development of a systems approach may be undertaken by the exporting or importing country or through the cooperation of both countries. The process of developing systems approaches may include consultation with industry, the scientific community, and trading partner(s). However, the NPPO of the importing country decides the suitability of the systems approach in meeting its requirements.

A systems approach may include measures that are added or strengthened to compensate for uncertainty due to data gaps, variability, or lack of experience. The level of such compensation included in a systems approach should be commensurate with the level of uncertainty.

Experience and the provision of additional information may provide the basis for renewed consideration of the number and strength of measures with a view to modifying the systems approach accordingly.

The development of a systems approach involves:

- obtaining from a PRA the identity of the pest risk and the description the pathway
- identifying where and when management measures occur or can be applied (control points)
- distinguishing essential measures and other factors or conditions
- identifying independent and dependent measures and options for the compensation for uncertainty
- assessing the individual and integrated efficacy of essential measures
- assessing feasibility and trade restrictiveness
- consultation
- implementation with documentation and reporting
- review and modification as necessary.

8. Evaluating Systems Approaches

The evaluation of systems approaches to determine their acceptability involves:

- considering the relevance of existing systems approaches for similar or the same pest(s) on other commodities
- considering the relevance of systems approaches for other pest(s) on the same commodity
- evaluating information provided on:
    - efficacy of measures
    - surveillance and interception, sampling data (prevalence of pest)
    - pest host relationship
    - crop management practices
    - verification procedures
    - evaluate trade impacts and costs, including the time factor
- considering data against desired confidence levels and taking into account options for the compensation for uncertainty where appropriate.

8.1 Possible outcomes of evaluation

These may include determination that the systems approach is:

- acceptable
- unacceptable:

- efficacious but not feasible
- not sufficiently effective (requires an increase in the number or strength of measures)
- overly restrictive (requires a reduction of the number or strength of measures)
- not possible to evaluate due to insufficient data or unacceptably high uncertainty.

Where the systems approach has been found unacceptable, the rationale for this should be detailed to facilitate the identification of possible improvements.

9. Responsibilities

Countries share the obligation to observe the principle of equivalence by considering risk management alternatives that will facilitate safe trade. Systems approaches provide significant opportunities to develop new and alternative risk management strategies, but their development and implementation requires consultation and bilateral cooperation. Depending on the number and nature of measures included in a systems approach, a significant amount of data may be required. Both exporting countries and importing countries are responsible for the provision of sufficient data and the timely exchange of relevant information in all aspects of the development and implementation of systems approaches.

9.1 Exporting country responsibilities

The exporting country should provide sufficient information to support evaluation and adoption of the systems approach. This may include:

- commodity, place of production and expected volume and frequency of shipments
- relevant production, harvest, packing/handling, transport details
- pest-host relationship
- risk management measures proposed for a systems approach, and relevant efficacy data
- relevant references.

Other responsibilities of the exporting country include:

- monitoring/auditing and reporting on system effectiveness
- taking appropriate corrective actions
- maintaining appropriate records
- providing phytosanitary certification in accordance with requirements of the system.

9.2 Importing country responsibilities

The importing country should provide specific information regarding its requirements. This includes:

- specification of information and system requirements:
  - identify pests of concern
  - describe level of protection required
  - describe types and level of assurance required (e.g. certification)
  - identify points requiring verification.
-

Importing countries should select least trade restrictive measures where there are options.

Other responsibilities of the importing country may include:

- propose improvements or alternatives (equivalence)
- audit
- specify actions for non-compliance
- review and feedback.

In some cases, certain elements regarding the implementation of the systems approach may be the responsibility of the importing country (e.g. limits on distribution).

Specifications for Standard-setting Activities of the ICPM -- May 2001

SPECIFICATION NO. 1: REVIEW AND UPDATING OF THE GLOSSARY OF PHYTOSANITARY TERMS

Description of the purpose of the standard:
The Glossary of Phytosanitary Terms is a reference standard listing harmonized terms, definitions, and abbreviations in each of the five FAO languages. It also provides cross-references and includes supplements where necessary to explain the interpretations and applications of certain terms.

Scope:
Review and updating of the Glossary of Phytosanitary Terms is done by the Secretariat using the Glossary Working Group for expert input. Changes to the Glossary are subject to the same approval procedures as an ISPM, requiring approval of the Interim Standards Committee for proposals sent to governments for consultation as well as approval of proposals submitted to the ICPM for adoption.
Terms and/or definitions for review may be identified by the ICPM, the Secretariat, or working groups.

Tasks:
Ongoing review, revision, and updating of the Glossary based on needs identified by the ICPM or Secretariat, or arising from the establishment of ISPMs. The Glossary Working Group reviews proposals and formulates recommendations for the Secretariat to submit to the Standards Committee taking into consideration:

- need for terms/definitions
- consistency with other terms, format, and other past decisions taken
- potential translation problems.

The Secretariat is responsible for gathering and summarizing proposals for the Glossary Working Group, and for reporting and record-keeping associated with review and updating of the Glossary, including reports of the Glossary Working Group.

Provision of resources:
Funding for meetings is provided from the regular programme of the IPPC Secretariat (FAO) except where expert participation is voluntarily funded by the expert's government.

Proposed work programme: Annual review or as directed by the ICPM.

Steward: IPPC Secretariat

Collaborator: EPPO and NAPPO alternatively provide the venue and logistical support.

Expertise:
The Glossary Working Group is a small, static group of experts (5 + the Secretariat) meeting annually or as needed in closed sessions to review proposals for changes to the Glossary and to formulate recommendations for the Secretariat. Members have a broad understanding of phytosanitary systems, represent different geographical regions and languages, and are willing to participate continuously in the work of the group. Continuity of members is essential for the effectiveness of the group.

Participants:
Mr. Hedley (New Zealand); Mr. Smith (EPPO); Ms. Bast-Tjeerde (Canada); Ms. Petter (France); Mr. Canale (Uruguay); and Mr. Griffin (IPPC Secretariat).

Approval: Third Session of the Interim Standards Committee, May 2001

References: Glossary of Phytosanitary Terms (ISPM No. 5)

SPECIFICATION NO. 2: REVISION OF ISPM NO. 1 (PRINCIPLES OF PLANT QUARANTINE AS RELATED TO INTERNATIONAL TRADE)

Description of the purpose of the standard:
The standard identifies and describes eight general principles and eight specific principles of plant quarantine as related to the application of phytosanitary measures in international trade. It is a reference standard that aids the understanding of obligations in the IPPC and the SPS Agreement and provides guidance for the evaluation of fundamental elements in phytosanitary systems.

Scope:
FAO Conference adopted ISPM No. 1 in 1993. This was before the revision of the IPPC and also before the completion of the GATT Uruguay Round negotiations that resulted in the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the establishment of the World Trade Organization. The adoption and coming into force of the SPS Agreement (1995) and the adoption of the New Revised Text of the IPPC (1997) represent further development of the original concepts that formed the basis for ISPM No. 1. This means that the standard is now inconsistent with the IPPC (1997) and describes principles differently than equivalent concepts in the SPS Agreement. Revision of ISPM No. 1 is needed to correct and update the standard.

Tasks:
The overall task is to undertake a complete review of ISPM No. 1 with the aim of updating the standard for consistency with the New Revised Text of the IPPC and to improve clarity as well as completeness.

In particular, attention should be given to:

- revising the title and text as phytosanitary principles
- full alignment with the New Revised Text
- consideration of whether non-discrimination is two principles as in the SPS Agreement
- consideration of whether the titles of "technical justification" or "risk analysis" is more appropriate
- principles which should be deleted
- principles which should be combined or added.

Provision of resources:
Funding for meetings is provided from the regular programme of the IPPC Secretariat (FAO) except where expert participation is voluntarily funded by the expert's government.

Proposed work programme: (not yet scheduled in the work programme)

Steward: to be determined.

Collaborator: to be determined

Expertise:
A working group of 5-7 phytosanitary experts having broad familiarity with phytosanitary systems and specific familiarity with the IPPC and the SPS Agreement, and representing diverse geographical regions.

Participants: to be determined

Approval: Third Session of the Interim Standards Committee, May 2001.

References: ISPM No. 1; Discussion papers from the IPPC Secretariat, including drafts that have been previously prepared

SPECIFICATION NO. 3: ISPM NO. 2 (GUIDELINES FOR PEST RISK ANALYSIS)

Description of the purpose of the standard:
ISPM No. 2 describes the process of pest risk analysis for phytosanitary systems.

Scope:
FAO Conference adopted ISPM No. 2, *Guidelines for pest risk analysis*, in November 1995. This was before the revision of the IPPC and also before many national plant protection organizations had experience with pest risk analysis. Subsequent revision of the IPPC and the rapid advancement of pest risk analysis in practice create the need for updating the guidance provided by ISPM No. 2. In particular, the standard provides no guidance on regulated non-quarantine pests, and it has certain key deficiencies such as not considering the feasibility of measures in risk management.

Tasks:
It was envisioned that the adoption of ISPM No. 11 would result in the withdrawal of ISPM No. 2 and its subsequent reformulation into a new standard, *General guidelines for PRA*. However, the ICPM has not yet taken this decision and therefore the specific tasks for the standard cannot yet be elaborated.

Provision of resources:
Funding for meetings is provided from the regular programme of the IPPC Secretariat (FAO) except where expert participation is voluntarily funded by the expert's government.

Proposed work programme: (not yet scheduled in the work programme)

Steward: IPPC Secretariat

Collaborator: to be determined

Expertise: to be determined

Participants: to be determined

Approval: Third Session of the Interim Standards Committee, May 2001.

References: ISPM No. 2; ISPM No. 11; Draft standard on Regulated non-quarantine pests

SPECIFICATION NO. 4: ISPM NO. 3 (CODE OF CONDUCT FOR THE IMPORT AND RELEASE OF EXOTIC BIOLOGICAL CONTROL AGENTS

Description of the purpose of the standard:
The standard describes responsibilities of authorities, importers, and exporters as regards the import and release of biological control agents. It provides useful guidance on the application of phytosanitary measures for regulating the movement of organisms used for biological control.

Scope: to be determined

Tasks:
The standard is scheduled for review in 2001. Issues that have arisen related to the standard and which should be included in its review include:

- regulatory guidance developed by OECD based on the standard
- sterile Insect Technique (SIT) issues
- issues related to the transport of dangerous goods
- issues related to nature conservation
- the use of genetically modified organisms as biological control agents
- possibilities for clarification and emphasis as regards invasive species and impacts on the environment.

Provision of resources:
Funding for meetings is provided from the regular programme of the IPPC Secretariat (FAO) except where expert participation is voluntarily funded by the expert's government.

Proposed work programme: (not yet included in the work programme)

Steward: IPPC Secretariat

Collaborator: to be determined

Expertise: to be determined

Participants: to be determined

Approval: Third Session of the Interim Standards Committee; May 2001.

References: ISPM No. 3; Discussion papers and meeting reports from the IPPC Secretariat

SPECIFICATION NO. 5: RISK ANALYSIS FOR ENVIRONMENTAL HAZARDS OF PLANT PESTS

Description of the purpose of the standard:
To provide specific guidance regarding the application of PRA to the evaluation of risks associated with plant pests as hazards to the environment.

Scope:
The environmental hazards standard provides details regarding risk analysis criteria for evaluating environmental impacts for plant pests, including invasive species affecting uncultivated/unmanaged plants and more broadly ecosystems contained in the PRA area.

It specifically does not include assessments for introduction of biological control organisms.

Tasks:
Review existing PRA procedures (IPPC and others as appropriate) and identify relevant hazards to the environment and methods for the evaluation of their risk. Formulate a supplement to the existing standard on PRA for quarantine pests (ISPM No. 11)t.

Provision of resources:
Funding for meetings is provided from the regular programme of the IPPC Secretariat (FAO) except where expert participation is voluntarily funded by the expert's government.

Proposed work programme: Expert Working Group set for 6-10 August 2001 in Vienna, Austria

Steward: to be determined

Collaborator: [EPPO]

Expertise: Requires phytosanitary experts familiar with PRA standards and procedures as well as familiarity with environmental impacts and methods for their evaluation.

Participants: Ms. Quinlan (GISP), Mr. Unger (Germany), + 5 other phytosanitary experts to be determined, including CBD representative(s)

Approval: Third Session of the Interim Standards Committee, May 2001

References: ISPM No. 2; ISPM No. 11; report of the working group that met last June; discussion papers as appropriate.

SPECIFICATION NO. 6: PEST RISK ANALYSIS FOR REGULATED NON-QUARANTINE PESTS

Description of the purpose of the standard:
To provide specific guidance regarding risk analysis for regulated non-quarantine pests (RNQP). Earlier attempts to combine PRA procedures for both quarantine and regulated non-quarantine pests in a single standard proved overly cumbersome and complicated due to the distinct differences in characteristics of the two types of pests. It was therefore envisioned that a family of PRA standards would be elaborated which would include a general standard (Revised ISPM No. 2) supported by two stand-alone standards; one on quarantine pests (now ISPM No. 11), and another on RNQP (proposed here). As the concept standard for RNQP nears completion, the elements of risk analysis that apply to regulated non-quarantine pests has become clearer and the possibility to create a supporting standard for PRA has been facilitated.

Scope:
It is envisioned that this standard will be a stand-alone document (not a supplement) and will completely describe PRA procedures for RNQP. It should not overlap unnecessarily with Guidelines for PRA (ISPM No. 2) or PRA for quarantine pests (ISPM No. 11).

Tasks:
review of existing standards and procedures
identify specific aspects of RNQP which require highlighting and explanation
formulate a draft standard that integrates unique aspects of RNQP with existing PRA procedures and provides specific guidance on evaluation methods

Provision of resources:
Funding for meetings is provided from the regular programme of the IPPC Secretariat (FAO) except where expert participation is voluntarily funded by the expert's government.

Proposed work programme: Expert Working Group tentatively set for 8-12 October 2001

Steward: to be determined

Collaborator: to be determined (possibly NAPPO)

Expertise: Requires phytosanitary experts familiar with PRA standards and procedures as well as familiarity with the draft concept standard on RNQP.

Participants: 5-7 phytosanitary experts (to be determined)

Approval: Third Session of the Interim Standards Committee, May 2001

References: Draft ISPM on RNQP; ISPM No. 2; ISPM No. 11; discussion papers as appropriate.

SPECIFICATION NO. 7: IRRADIATION AS A TREATMENT FOR PHYTOSANITARY PURPOSES

Description of the purpose of the standard:
This standard is to provide technical guidance for the evaluation, adoption, and use of irradiation as a phytosanitary treatment. It is designed to encourage consistency by providing essential information concerning the technical and operational aspects of using irradiation as a treatment for plant pests.

Scope:
Draft a new ISPM on the use of irradiation as a treatment for phytosanitary purposes. The use of irradiation to produce sterile organisms for sterile insect release, preserve commodities or enhance quality, or for any purpose other than a phytosanitary treatment, will be outside the scope of this standard. The standard should not encourage or discourage the adoption or use of irradiation as a treatment.

Tasks:
Review existing standard(s), draft standards and other technical information available on the application of irradiation as a phytosanitary treatment. Formulate a standard that provides guidance on the evaluation, adoption and use of irradiation treatments, including in particular the policy, efficacy and operational information which may be unique for irradiation as opposed to other treatments procedures. Prepare an appendix of the currently approved treatments for phytosanitary purposes.

Provision of resources:
Funding must be provided from extrabudgetary resources. Expert participation may be voluntarily funded by the expert's government.

Proposed work programme: Expert Working Group 5-9 November 2001 in Mexico City, Mexico

Steward: to be determined

Collaborator: International Atomic Energy Agency (IAEA)

Expertise: 5-7 phytosanitary experts familiar with phytosanitary treatments. Expertise in irradiation technology, in particular as regards phytosanitary treatments will also be helpful.

Participants: to be determined(including food safety experts)

Approval: Third Session of the Interim Standards Committee, May 2001

References: NAPPO standard; IAEA draft standards, meeting reports, and recommendations.

Interim Standards Committee

FOURTH MEETING

Rome: 19-23 November 2001

Provisional Agenda

1. Opening of the Session
2. Welcome Address
3. Election of Chairman
5. Adoption of the Agenda
5. Adoption of the Report of the Third Session of the Interim Standards Committee
6. Review of Comments from Country Consultation on Draft Standards:

- Guidelines for the preparation of pest lists
- Amendments to the Glossary of phytosanitary terms
- Regulated non-quarantine pests: concept and applications
- Guidelines for regulating wood packing material used in the transport of commodities
- Pest reporting
- Integrated measures for pest risk management (systems approaches)
- Guidelines for an import regulatory system

7. Other Business
8. Close of Meeting

Interim Standards Committee

THIRD MEETING

Rome: 21-25 May 2001

LIST OF PARTICIPANTS

Hiroshi AKIYAMA Director Planning & Coordinating Section Research Division Yokohama Plant Protection Station Ministry of Agriculture, Forestry and Fisheries 5-57 Kitanka-dori Naka-Ku, Yokohama Japan 231-0003 Tel: +81-45-2117164 Fax: +81-45-2110890 E-mail: nysb0101@sp.jppn.ne.jp	**István FÉSÜS** Head of Division Department of Plant Protection and Agri-environmental Management Division Ministry of Agriculture & Regional Development Kossuth Lajos tér 11 1055 Budapest Hungary Tel: +36.1.3014539 Fax: +36.1.3014644 E-Mail: istvan.fesus@f-m.x400gw.itb.hu
Reinouw Baast-Tjeerde International Standards Advisor Plant Health & Production Division Plant Products Directorate Canadian Food Inspection Agency 59 Camelot Drive Nepean Ontario KIA OY9 Canada Tel: + 1-613-2252342 Fax: + 1-613-2286626 E-mail: rbast@em.agr.ca	**John HEDLEY** National Advisor International Agreements Ministry of Agriculture and Forestry PO Box 2526 Wellington New Zealand Tel: + 64-4-4744170 Fax: + 64-4-4702730 E-mail: hedleyj@maf.govt.nz
Felipe CANALE Director Adjunto Asuntos Fitosanitarios Convencíon Internacional de Protección Vegetal Ministerio de Ganaderia, Agricultura y Pesca Meliton Gonzalez, 1169 - p-5 Montevideo Uruguay Tel: +598-2-6289.473 Fax: +598-2-6289.471 E-Mail: f_canale@hotmail.com	**Christopher HOOD** Senior Manager Plant Biosecurity Biosecurity Australia Ministry of Agriculture, Fisheries and Forestry GPO Box 858 Canberra ACT 2601 Australia Tel: + 61-2-6272.4878 Fax: + 61-2-6272.3307 E-mail: chris.w.hood@affa.gov.au
Plutarco Elías ECHEGOYÉN PRA & Surveillance support Unit Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA) Avenida Las Camelias No 14 Colonia San Francisco San Salvador El Salvador Tel: +503.2790174 Fax: +503.2790189 E-Mail: oirsa@ns1.oirsa.org.sv or pechegoyen@ns1.oirsa.org.sv	**Orlando MORALES-VALENCIA** Jefe Departamento de Proteccion Agricola y Ganadero Ministerio de Agricultura Av. Bulnes 140 Santiago Chile Tel: +56-2-6968500 Fax: +56-2-6966480 E-Mail: omorales@sag.minagri.gob.cl

Sarah A.H. OLEMBO Assistant Scientific Secretary Inter-african Phytosanitary Council (IAPSC) BP 4170 Nlongkak Yaoundé Cameroon Tel: +237-222.528 Fax: +237-224.754 E-mail: ahono_olembo@iccnet.cm	**Cesar.A. WANDEMBERG** Secretaria General Comunidad Andina (CA) Paseo de la República 3895 Lima 27 Peru Tel: +51-1-221.3329 Fax: +51-1-221.2222 E-mail: cwandemberg@andinanet.net
Mohammed Amal RAHEL Responsable de la quarantine et des aspects phytosanitaires Direction de la protection des végétaux des contrôles techniques et de la répression des fraudes Ministére de l'Agriculture et du développement rural et des pêches maritimes BP 1038 Rabat Morocco Tel: +212-37-297.543 Fax: +212-37-297.544 E-mail: rahel.amal@caramail.com	**IPPC SECRETARIAT** **N.A. Van der GRAAFF** Secretary International Plant Protection Convention Secretariat Chief, Plant Protection Service Viale delle Terme di Caracalla 00100 Rome Italy Tel: +39-06-570.53441 Fax: +39-06-570.56347 E-mail: Niek.VanDerGraaff@fao.org
Suparno SA Chief International Cooperation & Legal Affairs Center for Agricultural Quarantine Jl. Pemuda No 64 Jakarta Indonesia Tel: +62-21-489.2020 Fax: +62-21-489.2016 E-mail: cagsps@indo.net.id	**Robert L. GRIFFIN** Coordinator International Plant Protection Convention Secretariat Viale delle Terme di Caracalla 00100 Rome Italy Tel: +39-06-570.53588 Fax: +39-06-570.56347 E-mail: Robert.Griffin@fao.org
Lyall SMALL CPPC Representative #68 Welches Terrace St. Thomas Barbados Tel: +246-4216.196 Fax: +246-4216.196 E-Mail: small_w@caribsurf.com	**Dave NOWELL** Plant Pathologist International Plant Protection Convention Secretariat Viale delle Terme di Caracalla 00100 Rome Italy Tel: +39-06-570.52034 Fax: +39-06-570.56347 E-mail: Dave.Nowell@fao.org
Ian SMITH Director-General European & Mediterranean Plant Protection Organization 1, rue le Nôtre 75016 Paris France Tel: +33-1-45207794 Fax: +33-1-42248943 E-mail: hq@eppo.fr	**Katherine LONG** Consultant International Plant Protection Convention Secretariat Viale delle Terme di Caracalla 00100 Rome Italy Tel: +39-06-570.53261 Fax: +39-06-570.56347 E-mail: Katherine.Long@fao.org
Marc VEREECKE Principal Administrator Directorate-General VI – Agriculture Commission of the European Commission Rue de la Loi 200 B-1049 Bruxelles Belgium Tel: +32-2-296.3260 Fax: +32-2-296.9399 E-mail: marc.vereecke@cec.eu.int	**AD HOC EXPERT** **Roddie BURGESS** Head of Plant Service Forestry Commission 231 Corstorphine Road Edinburgh EH12 7AT United Kingdom Tel: +41-131-314.6401 Fax: +41-131-314.6148 **E-Mail: roddie.burgess@forestry.gsi.gov.uk**