

International Forestry Quarantine Research Group (IFQRG)
 General Meeting Feb 21-23, 2005
 Victoria Canada

Participants

Ms. Gillian Allard (FAO)	FAO Forestry
Dr. Eric Allen (Canada)	Canadian Forest Service
Dr. Al Barak (USA)	USDA Animal and Plant Health Inspection Service
Dr. Kerry Britton (US)	US Forest Service
Mr. Roddie Burgess (UK)	UK Forestry Commission
Dr. Brenda Callan (Canada)	Canadian Forest Service
Dr. Hugh Evans (UK)	UK Forestry Service
Mr. Jacques Gagnon (Canada)	Canadian Forest Service
Dr. Cheryl Grgurinovic (Australia)	Biosecurity Australia
Dr. Tom Hofacker (USA)	US Forest Service
Dr. Lee Humble (Canada)	Canadian Forest Service
Dr. Barbara Illman (US)	US Forest Service
Dr. Fusao Kawakami (Japan)	Yokohama Plant Protection Station, MAFF
Mr. Brent Larson (IPPC)	IPPC Secretariat
Dr. Isabel Leal (Canada)	Canadian Forest Service
Ms. Jane Levy (US)	USDA APHIS
Mr. Ralf Lopian (IPPC)	ICPM
Mr. Mitsusada Mizobuchi (Japan)	Yokohama Plant Protection Station
Dr. Anrei Orlinski (EPPO)	EPPO
Dr. Michael Ormsby (NZ)	MAF Forest Biosecurity
Sra.. Lucia Piazza (Italy)	ABRAS
Sr. Luigi Rossetti (Italy)	ABRAS
Mr. Christoph Schauwecker (US)	Oregon State University
Dr. Thomas Schroeder (Germany)	Federal Biological Research Centre for Agriculture and Forestry
Mr. Tom Searles (US)	American Lumber Standards
M.r Shane Sela (Canada)	CFIA
Dr. Adnan Uzunovic (Canada)	Forintek
Mr. Doug Walsh (Australia)	Biosecurity Australia

General Business

- Minutes from 2004 IFQRG meeting were reviewed and accepted.
- Brent Larsen provided a report from IPPC indicating the value of IFQRG in providing scientific support to standards development.
- Eric Allen reported that after a presentation regarding IFQRG to ICPM-06 in April 2004, some concerns were raised regarding formal reporting relationships. This issue is now resolved with the formation of the IPPC-Technical Panel on Forestry Quarantine.

Review of IFQRG Concept and Terms of Reference

- Discussion concluded with some of the following resolutions:
 - IFQRG serves as an independent body providing advice and research data to the IPPC standards committee through the Technical Panel on Forestry Quarantine
 - There is a need to increase membership representation by developing countries
 - IFQRG will continue to focus on treatments and science issues, but through its website provide a platform for information sharing; Qs &As on implementation.

See Appendix 1 for modified Terms of Reference

Organization-structure of IFQRG

- Secretariat/coordination
 - Eric Allen will continue as Chairperson. Shane Sela will serve as secretary.
- Document review and reporting process
 - IFQRG should only review scientific information; IFQRG has no responsibilities to respond to proposals.
 - Requests for proposal review from both internal and external sources must go through the IPPC secretariat (Brent Larson).
- Translation of documents
 - The working language of IFQRG meeting will be English
 - The navigational aspects of the IFQRG website will continue to be English/French/Spanish, but documents on the site will be in the original language written.

IFQRG Role

- Relationship with IPPC Technical Panels, IUFRO
 - IFQRG serves as an independent body providing advice and research data to the IPPC standards committee through the Technical Panel on Forestry Quarantine
 - During the first meeting of the Technical Panel on Forest Quarantine the week of March 7, 2005, the relationship between IFQRG and this Technical Panel will be discussed.
 - An IPPC Expert Working Group has been created to discuss debarking. IFQRG will communicate as appropriate with this group.
 - Relationship with International Union of Forest Research Organizations (IUFRO) has not been defined yet. Hugh Evans will continue to serve as liaison.
- Experimental studies
 - See committee reports
- Communication
 - Eric Allen will continue to host the IFQRG website, adding a password-protected area for access to documents

Status of ISPM 15 implementation, outstanding issues/problems

- Revision of ISPM #15
 - IFQRG can suggest changes to ISPM #15 through the Technical Panel on Forest Quarantine (TPFQ).
 - The TPFQ can recommend changes to the Standards Committee.
 - ICPM in 2006 is the earliest that changes to MB schedule can be approved since this change has already been placed on the work program. Only the technical annex can be changed – entire standard not opened for revision.

Committee reports

HT committee

- discussed origin of 56/30 schedule
- NZ tests slightly different than CA tests, they looked at which time/temp produced 100% kill – difficult to compare NZ results with CA results. More work needed.
- US Forest Service Forest Products Lab work – hardwood schedules: 10 species completed, model developed to allow kiln operators to calculate conditions needed for various kilns, hardwood species and timber sizes. Information available on FPL website. Many specific conditions required to achieve 56/30 – long time needed in kiln, water must be added to kiln, then back down temperature after 30 minutes met. Conifer species: all schedules about the same time/temperature needed for 56/30, not true for hardwoods. Solar kilns not practical because takes too long and not consistent/reliable temperature. Solar source to supplement other power source may be possible.
- UK developed software to create appropriate 56/30 schedules; wet bulb temperature is used as a measure of the wood temperature (less variable than dry bulb); certification report will be available for possible use by quarantine officials to certify the chamber.

Action Item: The IFQRG committee on heat treatment (Chair: Hugh Evans (UK)) agreed to co-ordinate the following research over the coming year:

1. further investigate the efficacy of the ISPM 15 heat treatment on specific “high impact” fungal species showing potential heat tolerance;
2. further investigate methods and systems to support the verification and effective application of heat treatment on wood packaging material;
3. determine the heating requirements for high density hard wood species to achieve a core temperature of 56°C for 30 minutes.

The 2nd meeting of the IFQRG concluded that to-date the heat treatment schedule listed in Annex 1 of ISPM 15 achieves the level of protection implied by ISPM 15. Based on current information, scientific data shows the approved HT in ISPM #15 kills representative quarantine pests to manage the quarantine risk associated with WPM.

Efficacy issues – Technical Panel for Phytosanitary Treatments will create a standard with all schedules from all ISPMs, and then remove treatment schedules from ISPM #15.

MB Committee

- Al Barak reviewed USDA Treatment Manual specification T404 and work in China to test efficacy of the ISPM 15 spec against Asian Longhorn Beetle. Post fumigation (5 days) wood samples were split with 100-150 larvae/pupae recovered per chamber. CxT of 1196 g/m³ gave 100% mortality at probit 9 over 24 hour fumigation period at 48 g/m³ at 21 °C. Fumigations were carried out in container and no instructions were given on how to carry out the treatment so that methods could be assessed. No power was available so no fans were used and vaporisers were based on jugs of hot water. Significant differences were noted between high and low concentration readings within same container. Residue levels: 6% of containers were found to have residue levels >5ppm on arrival in USA. He concluded that 16 hour fumigation period for 48g/m³ is not long enough and even 24 hours is ‘marginal’ for PWN, *Monochamus* and ALB. Also concluded that half hour gas reading was not needed and first reading should be at 1 hour. Suggested that more work at 5°C was needed to assess efficacy. He concluded that separate schedules would be required for containers and tarpaulin, and this should be available shortly.
- Dr Fusao Kawakami concluded from his work that there was no need to change the dosage rate but that exposure period should be extended to 24 hours (paper 3.3.). Also agreed that 30 minute gas reading was not enough time for gas concentration to stabilise to a level where corrective action could be taken. Fumigation temperature should be determined by commodity temperature (minimum 10°C). Use of circulation fans are ‘recommended’. Minimum temperature of 10°C should be maintained. He then reviewed paper 3.1 on fumigation under tarpaulin for PWN.
- Tests therefore show MB schedules must be extended to 24 hours to get sufficient concentration/time requirements. ½ hour reading not needed because it doesn’t provide useful information. Readings should be made at 1 hour, 2 or 4 hours and 16 or 24 hours. Higher concentration readings may be needed (see document 3-1). Initial dosage in ISPM #15 does not need to be changed (see document 3-3).
- Need to include more procedural guidance in ISPM #15 (e.g. fans should be used to distribute MB, temperature of commodity not air temperature must be used)
- APHIS will be testing sorptive qualities for various species of wood.
- Separate schedules will be needed for wood as a commodity as opposed to WPM because of differences in load factors.
- APHIS starting to test efficacy of MB schedules for wood decay fungi.
- Claims made by Japan & China at ICPM in 2002 were correct – current ISPM #15 MB schedules are not sufficient.

Based on the data presented, IFQRG believes that the efficacy of Methyl bromide fumigation could be significantly increased by:

- **Extending the minimum treatment time schedule to 24 hours;**
- **Recommending the use of gas circulation fans;**
- **Recommending that treatment with methyl bromide be limited to wood of 220 mm thickness;**
- **Recommending that minimum temperature be based on commodity temperature;**
- **Restricting volume of wood in chambers to 80% loading.**

Based on these criteria, a detailed treatment schedule will be developed and submitted at a future date. Technical annex can be changed – Technical Panel on Forest Quarantine can recommend modifications to the schedule. Ralph Lopian concluded that the Group was not happy with the current MBr schedule in ISPM 15 and suggested that IFQRG draft a statement that could be presented to ICPM-7 for its consideration. Further discussion recommended that to avoid complication a single table should be developed for consideration by the ICPM. Mike Ormsby raised the concern that a new schedule recommending higher MBr dosages would not likely be acceptable to countries with strict policies regarding MBr use. He therefore agreed to adjust the schedule to achieve efficacious fumigant concentrations throughout the fumigation process without raising initial MBr dosage rates.

Action Item: A modified MBr schedule will be developed considering the data and technical considerations discussed by the IFQRG and will be presented to the Technical Panel on Forestry Quarantine (TPFQ). The TPFQ will draft an information document for consideration by ICPM-7 and possible adoption through the IPPC fast-track procedure.

Criteria for submitting and evaluating proposals committee

- Proposals for new or revised treatments will go to Technical Panels first; evaluation based on Phytosanitary Treatments Standard, then passed to IFQRG if appropriate. Requests should be directed to Brent Larson (IPPC).
- New approved treatments would not be specific to a particular company. One company may supply the information for approval, but all companies that can supply the treatment can use the treatment once included in the standard.

Chemical Pressure Impregnation Committee

- Insufficient interest from industry.
- Committee will continue work on evaluation of CPI applied as a complete cover to be ingested by insects as they emerge or to address reinfestation issue.
- Research on pressure only treatment (no chemical or heat) is needed. Forintek plans to do this research.

Fumigation and Modified Atmosphere Committee

- Radio frequency work has been started. No final results yet.

- Metabolic stress disinfection and disinfestations work has started. No final results yet.
- Work on low pressure has started. No final results yet.
- SF work not promising because of high doses and temperatures required, not practical in application. No final results yet.
- Japan is testing alternative fumigants (see doc 3-2). Nothing very promising yet. More work needed.

Radiation/Microwave Committee

- Tasked with reviewing ITEL report, but proposal now needs to go through IPPC for Phytosanitary Treatment Technical Panel criteria for evaluating proposals.
- Overview of gamma irradiation and accelerated electron treatment
 - High dose is needed to kill (not sterilize) pests;
 - Currently, no commercial use for wood packaging material treatment
 - About twice as expensive as heat treatment
- Overview of microwave treatment
 - Actually a heat treatment – do we need to prove equivalent to 56/30? not even distribution of heat; core of wood article heats first, then heat moves to outside edges of wood article
 - Maybe not necessary to make equivalent to 56/30 – better to develop separate schedules for microwave treatment of various representative pests
 - Commercially available on small scale
 - Committee will look at practical options for criteria for microwave treatment or equivalent to 56/30

Global database/Information Sharing Committee

Herbarium Database

- BC host/fungus database available on the web at:
www.pfc.forestry.ca/cgi-bin/herbarium/Herbarium/index_e.html
- Software also available for development of a herbarium database through Natural Resources Canada, Canadian Forest Service, Pacific Forestry Centre.

Ophiostomatoid Fungi Database

- Trying to create the one-stop location for blue stain information
- Everyone working on blue stain is invited to participate in the development of this database.
- NPPOs need to request ICPM address taxonomic needs

Standard Interpretation Committee

- Reviewed development of questions and answers created through the listserv
- IFQRG members want the listserv to continue
- Listserv answers are **not official interpretation** of the ISPM #15; each country must provide interpretations.

- Technical justification for treatment of all WPM – cannot know origin of the wood in WPM since it moves around the world, so difficult to know risk associated with WPM in a specific consignment.
- ISPM #15 does not prescribe that a country must set up the standard requirements for export, but to accept WPM imported to their country to harmonize the import requirements throughout the world.

Debarking/bark freedom Committee

- Background for debarking: ISPM 15 Expert Working Group addressed debarking issue, was not required when draft standard was developed.
- Discussed at ICPM 4 and included in ISPM #15 **with technical justification**
- Definition of technical justification – scientific risk analysis or PRA needed
- IFQRG should provide scientific review of data brought forward as technical justification.
- Overview of past SPS cases, no definitive answers to help this issue
- IFQRG shouldn't be involved in the decision of whether debarking/bark freedom should be required; IFQRG should only review scientific information pass on to Technical Panel on Forestry Quarantine for analysis and recommendations to IPPC standards committee. NPPOs make final decision.
- Recent science available on debarking/bark freedom
 - Reinfestation experiments (document 9-2); HT round wood w/bark placed in forest; HT wood was reinfested.
 - Reinfestation of spruce logs/planks; round wood w/bark, w/o bark and planks w/bark on two sides; HT 56/30; exposed wood to bark beetles in lab; all samples were colonized but no beetles emerged from some planks and all logs w/o bark; next phase of testing will look at amount of bark needed for emergence.
 - UK will be working on HT round wood w/bark and planks w/bark on two sides will be placed in the field to monitor attack rate.
 - Some WP production facilities are located near infested areas, so reinfestation is possible
 - Australia looking at the risk based on what they see at the border (real life); treated and untreated WPM; bark freedom improves inspection ability; also looking at possible non-timber pests associated with WPM w/bark.
 - Information gaps – no evaluation of MB, no evaluation of fungi, current work limited to northern hemisphere species, trials conducted immediately after HT, only tested worse case scenarios.
 - Key questions – what species will reinfest treated wood? Quarantine-pests? How much bark is too much? Difference in risk of freshly cut/treated wood and older/dried wood; does the presence of bark effect the efficacy of MB treatments; determine what percentage of WPM in use is made of fresh wood and what percentage is older wood;
 - **ISPM #15 provides a level of protection, debarking may provide another level of protection, but international harmonized application of protection is critical.**

- Expert Working Group on debarking – will define debarking as it relates to all wood articles, not just WPM.

Action Item: NPPOs need to do audits/surveys at border inspection to determine how much WPM has bark, and how much WPM has pests with and without treatment (ISPM #15 compliant).

Next IFQRG meeting:
November 29-Dec 1, 2005 in Rome

Appendix 1

International Forestry Quarantine Research Group (IFQRG) Terms of Reference – revised February 2005

1. Mission

The mission of the International Forestry Quarantine Research Group (IFQRG) is to address critical forestry quarantine issues for the global plant protection community through analysis, discussion and collaborative research in the development of multi-disciplinary approaches and solutions

2. Clients

A key client of the IFQRG is the Interim Commission of Phytosanitary Measures (ICPM) and its subsidiary bodies: technical panels, expert working groups, regional and national plant protection organizations, in particular the Technical Panel on Forestry Quarantine.

3. Function

The International Forestry Quarantine Research Group serves several main functions:

- An independent, international body providing scientific analysis and review of global phytosanitary issues and new information
- A forum for the discussion and clarification of key issues related to the phytosanitary implications of global trade.
- Identify and undertake collaborative scientific research aimed at high priority forestry quarantine questions.
- To encourage multilateral discussion about forestry quarantine issues

4. Structure

The International Forestry Quarantine Research Group is an *ad hoc*, independent organization composed of scientists, technical specialists, plant health regulatory officials and others interested in developing solutions to forest quarantine issues. Sub-committees are formed as required to address specific issues.

5. Membership

Membership is open to all interested parties with the goal of global representation from scientific, industrial and phytosanitary organizations from both developed and developing nations. All members of the IFQRG are encouraged to seek additional participation and regional representation.

6. Decision making

IFQRG decisions, views and opinions will be developed on a consensus basis and posted on the IFQRG website (www.forestry-quarantine.org). Outcomes of formal group discussions will be provided to the Interim Commission of Phytosanitary Measures (ICPM), and other interested parties upon request. When consensus is unattainable, a

summary of the discussion will be maintained noting both majority and minority viewpoints.

7. Language

The working language of the IFQRG is English. The navigational aspects of the IFQRG website will be English/French/Spanish, but documents on the site will be in the original language written.

8. Coordinating roles and sub-committees

- Chair: provide overall guidance and coordinate the work of the sub-committee chairs. The chair has a position on the IPPC Technical Panel on Forestry Quarantine.
- IUFRO Liaison: coordinate the interface between the IFQRG and the International Union of Forest Research Organizations (IUFRO).
- Secretary: records discussion at meetings, maintain documents, provide meeting minutes
- Sub committee chairs and members: Sub-committees will be created as required. The sub-committee chairs will oversee the work of the sub-committee and liaise with the IFQRG chair. Sub-committee members will have experience in the topics being discussed and carry out the tasks assigned to their sub-committee.

9. Meetings

The International Forestry Quarantine Research Group will meet on an annual basis, generally near the end of the calendar year to accommodate meeting dates of client groups.

2005/06 Chairs and committee members.

Chair: Eric Allen (Canada)
IUFRO Liaison: Hugh Evans (UK)
Secretary: Shane Sela (Canada)

Sub-committee chairs (**in bold**) and committee membership

Sub-committees to review ISPM 15 approved measures:

1. Heat treatment (**Hugh Evans (UK)**, Eric Allen, Barbra Illman, Bill Simpson , Peter Garahn , Jeong-Eun Ahn)
2. Methyl Bromide (**Al Barak (USA)**, Vic Mastro, Wang Yuejin, Jong-Ho Lee, Roddie Burgess, Bill Magee, Mitsusada Mizobuchi)

Sub-committees to review proposed measures, new technologies and information:

3. Developing criteria for submitting and evaluating proposals for treatments to be included in ISPM No. 15 (**Doug Walsh (Australia)**, Eric Allen, Hugh Evans)

4. Chemical Pressure Impregnation (**Frank Brooks**, Wang Yuejin , Jeff Morrell, Paul Cooper , Ron Mack, Doug Walsh , Thomas Schroeder , Joran Jermer
5. Radiation/Microwave (**Thomas Schroeder (Germany)**, Wang Yuejin, Doug Walsh , Ron Mack, Mary Flemming
6. Fumigation and modified atmosphere (**Vic Mastro (USA)**, Gord Henry, Wang Yuejin, Jong-Ho Lee, Roddie Burgess, Bill Magee, Mitsusada Mizobuchi, Fusao Kawakami, Al Barak)
7. Global interception database and information sharing (**Gord Henry**, Eric Allen, Hugh Evans, Bob Haack, Doug Walsh, Thomas Schroeder)
8. Bark infestation experiment (**Lee Humble**, Eric Allen, Hugh Evans, Kerry Britton, Bob Haack, Doug Walsh, Thomas Schroeder, Peter DeGroot, Shane Sela)
9. ISPM #15 Interpretation and implementation:(**Roddie Burgess**, Gordon Henry, Doug Walsh, Peter Thomson, Andrei Orlinski, Kyu-Ock, Yim. Marcos Beeche)