

## SCIENTIFIC OPINION

### **Statement on a study proposal prepared by the US to support a future derogation request from the EU import requirements for wood packaging material originating in the US and used to pack and transport military ammunition<sup>1</sup>**

**EFSA Panel on Plant Health (PLH)<sup>2, 3</sup>**

European Food Safety Authority (EFSA), Parma, Italy

#### SUMMARY

Following a request from the European Commission, the EFSA Panel on Plant Health was asked to deliver a statement on a study proposal prepared by the US to support a future derogation request from the Community import requirements for wood packaging material (WPM) originating in the US and used to pack and transport military ammunition.

The Panel reviewed the submitted study proposal and based its conclusions on the shortcomings identified in the study proposal.

It was concluded that, due to these shortcomings, the evaluation of the methodological approach described in this study proposal with regard to:

1. the determination of the likelihood that live pinewood nematode (*Bursaphelenchus xylophilus*) and other harmful organisms relevant for the Community are present in the WPM used by the US Department of Defense to pack and transport military ammunition (Pest survey component),
2. the assessment of the likelihood that harmful organisms may be introduced into the Community through the WPM pathway (Pathway Risk Analysis component)

cannot be conducted.

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<sup>1</sup> On request from the European Commission, Question No EFSA-Q-2010-00056, adopted on 26 January 2010.

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<sup>3</sup> Acknowledgement: EFSA wishes to thank the members of the Working Group on Wood Packaging Material for the preparation of this opinion: Michael John Jeger, David Makowski, Gregor Urek, and EFSA's staff members Olaf Mosbach-Schulz and Giuseppe Stancanelli for the support provided to this EFSA scientific output.

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**KEY WORDS**

*Bursaphelenchus xylophilus*, European Union, pine wood nematode, United States of America, wood packaging material

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## BACKGROUND AS PROVIDED BY EUROPEAN COMMISSION<sup>4</sup>

The current Community plant health regime is established by Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community (OJ L 169, 10.7.2000, p.1).

The Directive lays down, amongst others, the technical phytosanitary provisions to be met by plants and plant products and the control checks to be carried out at the place of origin on plants and plant products destined for the Community or to be moved within the Community, the list of harmful organisms whose introduction into or spread within the EU is prohibited and the control measures to be carried out at the outer border of the Community on arrival of plants and plant products.

Wood packaging material (WPM) made of unprocessed raw wood is recognised to be a pathway for the introduction and spread of plant harmful organisms. Consequently, WPM coming from third countries, except Switzerland, needs to fulfil certain special requirements in order to be allowed for import into the Community. These requirements (listed in Annex IV, part A, point 2 of Council Directive 2000/29/EC), stipulate that the WPM has to be made of wood free from bark (with a precisely defined tolerance level), be subject to one of the approved treatments as specified in Annex I to FAO International Standard for Phytosanitary Measures No 15 (ISPM N°15) on *Guidelines for regulating wood packaging material in international trade* (basically a heat treatment or methyl bromide fumigation), and it should display a mark as specified in Annex II to ISPM N°15, indicating that the WPM has been subjected to an approved phytosanitary treatment.

The US Phytosanitary authorities have informed the Commission that the United States Department of Defence has stockpiles of ammunition and related supplies packed in WPM which has often been on storage for more than 5 years and which may have not been treated in accordance with ISPM N°15. The United States Department of Defence would like to move such material to Europe. However, since this US military WPM does not comply with ISPM N°15 it is not allowed to enter the Community territory.

According to the United States Department of Defence the treatment of this WPM according to ISPM N°15 would be expensive and logistically unfeasible. Therefore, the US is looking for an alternative to the existing Community phytosanitary requirements. For this reason the US intends to carry out a two-year study to determine the likelihood that live pinewood nematode (*Bursaphelenchus xylophilus*) and other harmful organisms are present in this specific class of WPM used to pack and transport military ammunition. The study will also assess the likelihood that harmful organisms may be introduced into the Community via this WPM pathway. The US authorities intend to use the information that will be produced by this study to seek, if justified, derogation from the present Community special requirements for WPM.

In October 2009, a US delegation indicated that they would very much appreciate to receive comments of the methodological aspects of the above-mentioned study. Since the study is designed to assess the risk posed to plant health by this specific military WPM, the Commission is seeking the advice from the European Food Safety Authority in the form of a scientific opinion on the content of this study proposal.

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<sup>4</sup> Submitted by European Commission, ref. SANCO E1/RB/svi D(2009) 510568 and SANCO E1/GC/svi D(2009) 510617

#### **TERMS OF REFERENCE AS PROVIDED BY THE COMMISSION**

EFSA is requested, pursuant to Article 29(1) and Article 22(5) of Regulation (EC) No 178/2002, to provide a scientific opinion on the study proposal on wood packaging material from the United States Department of Defence, provided by the US Phytosanitary Authorities.

In particular, EFSA is requested to provide a scientific opinion an evaluation of the methodological approach described in this study proposal with regard to:

1. the determination of the likelihood that live pinewood nematode (*Bursaphelenchus xylophilus*) and other harmful organisms relevant for the Community are present in the WPM used by the US Department of Defence to pack and transport military ammunition (Pest survey component),
2. the assessment of the likelihood that harmful organisms may be introduced into the Community through the WPM pathway (Pathway Risk Analysis component).

## DISCLAIMER

*The present document provides scientific advice to the European Commission on the scientific quality of a draft proposal for a study. This document does not constitute, and cannot be construed as, an implicit or explicit endorsement to the decision to perform a study or to the concrete proposal for a study or to any proposal for a study or to any study, or as the manifestation of a preference of EFSA's Panel on Plant Health for a specific methodological approach. The document does not bind EFSA or EFSA's Panel on Plant Health to the statements included therein, should another request for a scientific opinion be filed on a similar draft proposal for a study or on a draft study, or on a similar study or a study linked to the proposal assessed in the present document.*

## EVALUATION

### 1. Introduction

This document presents a statement of the Panel on Plant Health in response to a request for a scientific opinion on a study proposal on wood packaging material (WPM), submitted by the US Department of Defense (DoD) to the European Commission. The proposed study consists of two separate elements: a pest survey of DoD WPM and a pathway risk analysis. The US authorities intend to use the information that will be produced by the proposed study to seek, if justified, derogation from the present Community special requirements for wood packaging material.

This statement has been based on the revised version of the study proposal submitted by the US Authorities to the Commission and forwarded to EFSA in December 2009<sup>5</sup>. This revised version replaced the document submitted originally with the Terms of Reference, while the original Terms of Reference remained unchanged.

#### 1.1. Special requirements for wood packaging material

In the International Standard for Phytosanitary Measures (ISPM) No. 15 (FAO, 2007; 2009) wood packaging material is recognised as a pathway for the introduction and spread of plant pests. Interceptions of wood packaging material infested with pinewood nematode and insects are very often reported (Brockerhoff et al., 2006; Gu et al., 2006) and several destructive fungal pathogens of trees have been postulated to be introduced in the past through this pathway (Engelbrecht et al., 2004; Fraedrich et al., 2008; Gonthier et al., 2004; Harrington et al., 2008; Linzer et al., 2008; Panconesi, 1999).

The ISPM No. 15 describes internationally accepted measures that may be applied to wood packaging material by all countries to reduce significantly the risk of introduction and spread of most quarantine pests that may be associated with that material (FAO, 2009).

The requirements to allow importation of wood packaging material into the Community (listed in Annex IV, part A, point 2 of Council Directive 2000/29/EC<sup>6</sup>), stipulate that the wood packaging material has to be made of wood free from bark (with a precisely defined tolerance level), be subject to one of the approved treatments as specified in Annex I to FAO International Standard for Phytosanitary Measures No. 15 on *Guidelines for regulating wood packaging material in international trade* (basically a heat treatment or methyl bromide fumigation), and it should display a

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<sup>5</sup> Submitted by European Commission, ref. SANCO E1/GC/svi D(2009) 510617

<sup>6</sup> Council Directive 2000/29/EC of 8 May 2000 on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community. OJ L 169, 10.7.2000, p. 1-146. Consolidated version available from:  
eur-lex at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000L0029:20090303:EN:PDF>

mark as specified in Annex II to ISPM No. 15, indicating that the WPM has been subjected to an approved phytosanitary treatment.

## 1.2. Evaluation procedure

The document titled United States Department of Defense Wood Packaging Material Study Proposal was examined. This statement is based on shortcomings identified in the study proposal.

## 2. Remarks on the submitted document

### 2.1. Remarks on pest survey component

No information is given on the criteria used to select pinewood nematode *Bursaphelenchus xylophilus* and insect pests as the only targets of the study.

#### 2.1.1. Remarks on diagnostics of pinewood nematode and insect pests

The study proposal describes standard procedures to detect and identify pinewood nematode, but no information on the precision of visual inspection for insect damage and detection of larvae is given.

#### 2.1.2. Remarks on the sampling and study design

*Study universe:* The study proposal mentions eight US Department of Defense depots with individual storage units, but no definition on the population (study universe in statistical terms) of wood packaging lots/units, to be considered in the study, is given.

In any study plan, a description of the considered study universe gives essential information for the sampling and study design, but no information about characteristics of the wood packaging lots/units for importation into the EU, e.g. number, form or size of lots/units, is given in the document.

*Study design:* The study proposal states that the objective is to detect a 1% or higher infestation of pinewood nematode or insects with 95% confidence without any reference to the underlying study universe and the individual units.

Therefore, the infestation scenarios, e.g. the minimal number of packaging lots/units with minimal infestation of pinewood nematode or insects that can be detected with the proposed study design at a given power are not defined.

Furthermore, the proposal mentions some heterogeneity of wood package material in:

- origin, which is frequently no longer traceable;
- form, which varies from pallets through boxes or crates to dunnage;
- age (since production), material (e.g. presence of bark/wane etc.) and treatments (e.g. preservatives);
- storage conditions (e.g. humidity, temperature, light);
- or presence of blue stain or live insects

but the study design does not reflect this heterogeneity in the sample size calculation.

As the heterogeneity of wood packaging material is known but not considered, the proposed sample size calculation cannot ensure a precise estimation of the probability of infection in all reasonable defined subgroups of wood packaging material.

*Sampling:* The sampling is randomised for the selection of storage units, which means qualified buildings (with lots subject to shipment to EU countries). However there are no descriptions of either the characteristics or heterogeneity of the storage units, or how the sample size per storage unit is determined.

Some exclusion criteria for the sampling of specific lots within a storage unit are given, but not supported by appropriate literature/evidence. It is implicitly assumed that infection is only possible at the time of production (packaging) and not while in storage.

On a smaller scale heterogeneity may appear also within each wood packaging lot/unit for importation into the EU. No information is given on the specific sampling procedure within one unit or lot, although the precision of the quantitative results of detection depends on the relation between the weight of sampling material and the total weight of the lot/unit.

## 2.2. Remarks on the pathway analysis

The proposal follows the general steps listed in an IPPC standard. No details are given on how the quantitative and/or qualitative pathway analysis will be performed. Therefore, no evaluation of the proposed pathway analysis can be conducted with regard to the likelihood that harmful organisms may be introduced into the EU through the WPM pathway.

## CONCLUSIONS

Due to shortcomings identified in the study proposal, the evaluation of the methodological approach described in this study proposal with regard to:

1. the determination of the likelihood that live pinewood nematode (*Bursaphelenchus xylophilus*) and other harmful organisms relevant for the Community are present in the WPM used by the US Department of Defense to pack and transport military ammunition (Pest survey component),
2. the assessment of the likelihood that harmful organisms may be introduced into the Community through the WPM pathway (Pathway Risk Analysis component)

cannot be conducted.

## DOCUMENTATION PROVIDED TO EFSA

1. European Commission, ref. SANCO E1/RB/svi D(2009) 510568
2. European Commission, ref. SANCO E1/GC/svi D(2009) 510617

## REFERENCES

Brockerhoff EG, Bain J, Kimberley M and Knížek M, 2006. Interception frequency of exotic bark and ambrosia beetles (Coleoptera: Scolytinae) and relationship with establishment in New Zealand and worldwide. Canadian Journal of Forest Research, 36(2), 289-298.



- Engelbrecht CJB, Harrington TC, Steimel J and Carpetti P, 2004. Genetic variation in eastern North American and putatively introduced populations of *Ceratocystis fimbriata* f. *platani*. *Molecular Ecology*, 13, 2995-3005.
- FAO (Food and Agriculture Organisation of the United Nations) 2007. International Standards for Phytosanitary Measures 1 to 29 (2007 edition), ISPM No. 15 Guidelines for Regulating Wood Packaging Material in International Trade (2002) with modifications to Annex I (2006), Rome, 189-199.
- FAO (Food and Agriculture Organisation of the United Nations) 2009. International Standards for Phytosanitary Measures, Revision of ISPM No. 15 Regulation of Wood Packaging Material in International Trade (2009), Rome, 16 pp.
- Fraedrich SW, Harrington TC, Rabaglia RJ, Ulyshen MD, Mayfield AE, III, Hanula JL, Eickwort JM and Miller DR, 2008. A fungal symbiont of the redbay ambrosia beetle causes a lethal wilt in redbay and other Lauraceae in the Southeastern United States. *Plant Disease*, 92(2), 215-224.
- Gonthier P, Warner R, Nicolotti G, Mazzaglia A and Garbelotto M, 2004. Pathogen introduction as a collateral effect of military activity. *Mycological Research News*, 108, 468-470.
- Gu J, Braasch H, Burgermeister W and Zhang J, 2006. Records of *Bursaphelenchus* spp. Intercepted in imported packaging wood at Ningbo, China. *Forest Pathology*, 36, 323-333.
- Harrington TC, Fraedrich SW and Aghayeva DN, 2008. *Raffaelea lauricola*, a new ambrosia beetle symbiont and pathogen on the *Lauraceae*. *Mycotaxon*, 104, 399-404.
- Linzer RE, Otrrosina WJ, Gonthier P, Bruhn J, Laflamme G, Bussieres G and Garbelotto M, 2008. Inferences on the phylogeography of the fungal pathogen *Heterobasidion annosum*, including evidence of interspecific horizontal genetic transfer and of human-mediated, long-range dispersal. *Molecular Phylogenetics and Evolution*, 46, 844-862.
- Panconesi A, 1999. Canker stain of plane trees: a serious danger to urban plantings in Europe. *Journal of Plant Pathology*, 81(1), 3-15.