

SUPPLEMENT TO ISPM No. 5 (GLOSSARY OF PHYTOSANITARY TERMS)

Supplement No. 3

DEBARKED AND BARK-FREE WOOD

1. Scope

This supplement provides practical guidance to National Plant Protection Organizations (NPPOs) on differentiating between debarked wood and bark-free wood, where removal of bark is required to reduce the risk of introduction and/or spread of quarantine pests associated with bark.

This supplement does not specify the effectiveness or technical justification of removal of bark.

2. References

Pest risk analysis for quarantine pests, including analysis of environmental risks and living modified organisms, 2004. ISPM No. 11, FAO, Rome.

Definitions

For the purpose of adoption, this sub-section contains terms or definitions that are new or revised in the present draft supplement. Once it has been adopted, the sub-section will be deleted, and the new and revised terms and definitions will be transferred into the main text of ISPM No. 5, and will not appear in the supplement.

New term and definition

bark	The layer of a woody trunk, branch or root outside the cambium
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Revised terms and definitions

bark-free wood	Wood from which all bark, except ingrown bark around knots and bark pockets between rings of annual
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	growth, has been removed
debarked wood*	Wood that has been subjected to any process designed to remove bark from wood. (Debarked wood is not necessarily bark-free wood.)

* Note: this will replace the current term *debarking*.

3. Background

Wood with bark may be a pathway for the introduction and spread of some quarantine pests. The level of pest risk is dependent on a wide range of factors such as the pest, commodity type (e.g. round wood, sawn wood, wood chips), origin and any treatment applied to the wood.

Some NPPOs apply a requirement for debarked or bark-free wood as a phytosanitary measure. Different interpretations by NPPOs of what constitutes debarked and bark-free wood may have an impact on the international trade in wood.

This supplement does not provide technical justification for the use of measures requiring that wood be debarked or bark-free. It is intended solely to provide guidance to NPPOs ~~that require this type of phytosanitary measure.~~

Debarking of logs may be undertaken by industry as part of wood processing designed to remove a large majority of the bark, and thereby producing debarked wood, regardless of phytosanitary concern.

Debarking using conventional industrial procedures usually does not remove all of the bark from logs. The amount of bark removed in debarking depends on a number of factors, for example, time of year of harvest, duration of storage before the debarking process, and the age and type of the machinery. In general, up to 3 percent of bark on coniferous logs may remain and up to 10 percent of bark on non-coniferous logs may remain after normal industrial debarking processes.

4. General Observations Regarding Pest Risk Associated with Bark

Removal of bark may reduce the phytosanitary risk from some insects by limiting the possibilities of cambial feeding by the larvae. For other insects, such as bark beetles, the debarking process may leave sufficient bark for the larvae to complete their life cycle. The area around branch

bases, for example, is particularly attractive to some bark beetles, and therefore the removal of bark is not always a sufficient phytosanitary measure. It may also have only a limited effect against some fungal organisms. Removal of bark and any associated cankers may reduce the risks presented by some pathogens and decay organisms. Removal of bark can speed up drying of nutrient-rich outer layers of the wood and alter microclimatic conditions at the bark–wood surface interface leading to fungistatic conditions and reduced growth and sporulation opportunity. When determining import requirements for wood products, contracting parties should also take into account that certain production processes may eliminate pest risks associated with bark (e.g. veneer production).

In terms of this standard, ingrown bark around knots (i.e. areas of bark from branches that have become encased during annual growth) and bark pockets (i.e. areas of bark between rings of annual growth) are usually not considered to present a different phytosanitary risk from that which may already have been determined to exist in relation to their surrounding wood. (A cross-sectional line drawing of wood is provided in Appendix 1.)

Some importing NPPOs require debarked wood or bark-free wood as a phytosanitary measure.

Where risks from bark on wood have been determined to be present and when the phytosanitary measures of debarked and bark-free wood are considered insufficient to ensure that all pest risks are sufficiently managed, these measures may be applied in combination with other measures. Additionally, in some cases the removal of bark from wood may increase the efficacy of other measures and may facilitate visual inspection.

Although many pest risks are reduced by debarking, in some cases the residual bark that remains after debarking may present a phytosanitary risk. In such cases additional phytosanitary measures may be required. One of these, based on technical justification, may be a requirement that the wood be bark-free.

Such phytosanitary measures should not be required where there is evidence that pest risk is adequately managed or absent. This may be because of the origin (which may be a pest free area), the species of pests

present in the area or the specific type of wood concerned. Importing NPPOs should determine whether the removal of bark is technically justified before requiring it as a phytosanitary measure.

Based on technical justification the removal of bark may be considered a sufficient phytosanitary measure where it is significantly effective against pests that are dependent on bark for some or all stages of their life cycle. Removal of bark may be limited to certain times of the year, based on the period of emergence of pests in relevant exporting countries and further processing in the importing country, or may be combined with other measures where removal of bark is not sufficient to manage the phytosanitary risk when used alone.

5. Setting Bark Tolerances for Debarked Wood

Contracting parties may require debarked wood as a phytosanitary measure, based on technical justification. They may also set tolerances for residual levels of bark and, in addition to the criteria set out in ISPM No. 11 (*Pest risk analysis for quarantine pests, including analysis of environmental risks and living modified organisms*, 2004), take into account the following:

- species or group of species of tree in relation to pest life cycle
- bark thickness
- shape and size of remaining bark: for example a piece of bark the shape and size of a sheet of paper (e.g. A4 or letter-size) poses a higher risk than a long narrow strip of the same surface area
- for species dependent on bark, the relationship between infestation probability and the quantity of residual bark
- insect gallery size and configuration
- whether pest development occurs within the bark or beneath the bark
- moisture content and temperature of wood to sustain pest development
- climatic and seasonal conditions necessary to sustain pest development throughout the harvesting, storage and transport phases
- potential post-harvest infestation of residual bark and wood
- commodity type (round wood, sawn wood, wood chips)
- transferability of pests from one species of wood to another
- the presence of cankers and blue stain fungi associated with the bark.

6. Bark-free Wood as a Phytosanitary Measure

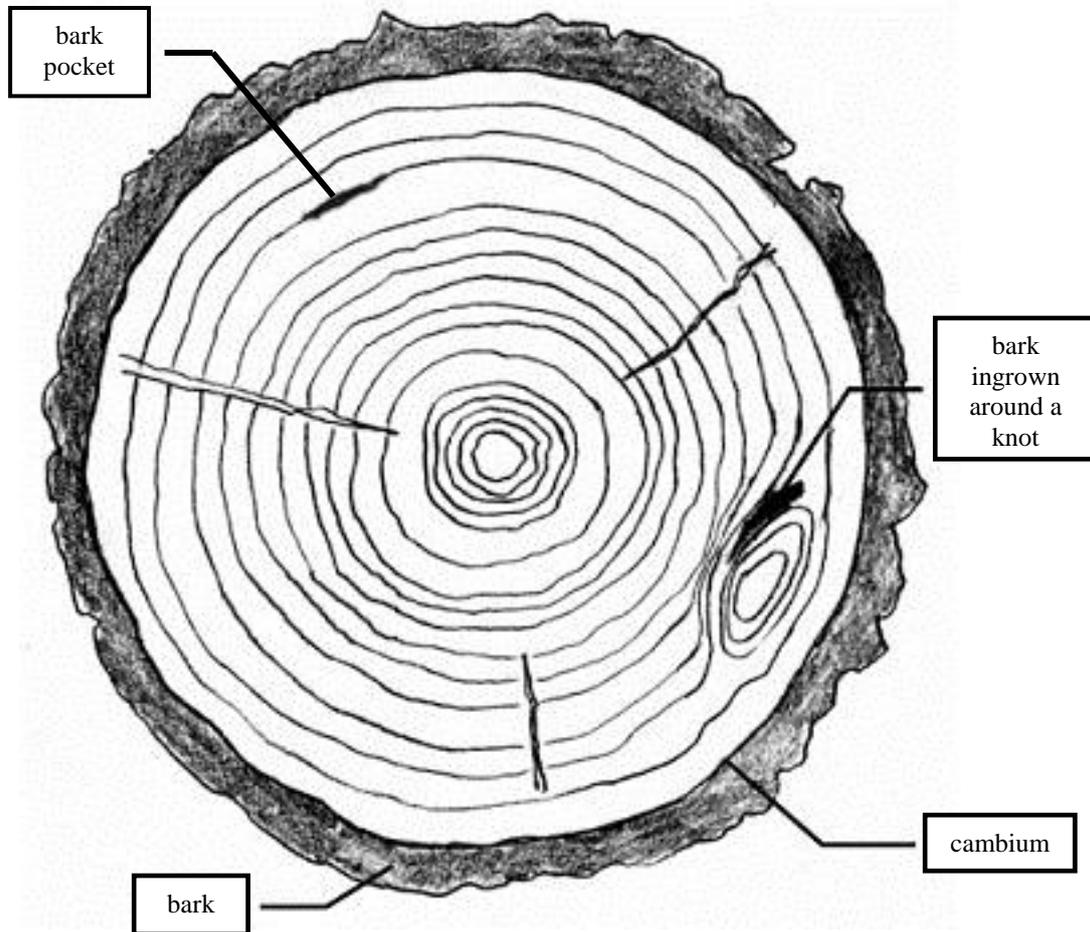
In cases where even small pieces of bark may present a phytosanitary risk, NPPOs may require that the wood be bark-free as a phytosanitary measure, based on technical justification. These cases may include:

- where a risk for a specific pest is identified and can be eliminated by complete removal of the bark.
- when wood is subject to the application of another measure and that measure is insufficient to mitigate the risks sourcing from [regulated quarantine](#) pests associated with bark, including post-treatment infestation.
- where the presence of bark may reduce the efficacy of another measure required to mitigate pest risks from pests within the cambial layer.

Where importing NPPOs require that wood be bark-free, the commodity should not retain any bark.

APPENDIX 1

CROSS-SECTIONAL LINE DRAWING OF WOOD¹



¹ This appendix is not an official part of the supplement. It is provided for information only.