

CAMBIOS PROPUESTOS AL BORRADOR DE LA NIMF MOVIMIENTO INTERNACIONAL DE SEMILLAS

PARRAGRAF	CATEGORY	COMMENTS
[53]The standard also provides guidance on procedures to establish phytosanitary import requirements to facilitate the international movement of seeds; on inspection, sampling and testing of seeds; and on procedures for the phytosanitary certification of seeds for export and re-export.	Technical	Term defined in ISPM 5 and to avoid confusion with other certification of seeds (Production, quality etc.).
[67] seeds are also regularly moved internationally for research purposes. Therefore, when assessing the pest risk and determining appropriate phytosanitary measures, NPPOs should consider whether the seeds are intended to be used under post-entry—quarantine restricted condition or to be released for planting in the environment in the importing country.	Technical	Post entry quarantine is an option of phytosanitary measure and not a purpose to import seeds as described in the draft.
[68]A pest risk analysis (PRA) should determine if the seeds are a pathway for the entry, establishment and spread of quarantine pests and their potential economic consequences in the PRA area. The PRA should consider the purpose for which the seeds are imported (e.g. field planting, research, testing) and the potential for quarantine pests to be introduced and spread or for regulated non-quarantine pests to cause an economically unacceptable impact.	Technical	Consistency with ISPM No.11.
~~[72]Seeds are moved internationally for many purposes. Many seeds (including pelleted and coated seeds) are planted for food and ornamental plant production but also for a number of other purposes (e.g. production of biofuels, fibre, forestry, pharmacological uses, pre-commercial uses (research, seed multiplication)).~~ [72] Seeds (including pelleted and coated seeds) are moved internationally for many purposes. They are planted for food, forage, production of ornamental plant, biofuels, fibre, forestry and pharmacological uses. They also have pre-commercial uses (research, seed multiplication).	Editorial	Better understanding
[75]Seed companies may have breeding and multiplication programmes in several countries, and may distribute seeds from these countries to many other countries. The international movement of seeds may involve small or large quantities. Moreover breeding, selection and multiplication of seeds are conducted internationally to develop new varieties that are adapted to a range of environments and conditions.	Editorial	Moved from p. 76, because is related to p. 75
[76]Contracting parties face challenges associated with the international movement of seeds that are distinct from the international movement of other types of plants for planting. For example, seeds produced in one country and exported to a second country for processing (e.g. pelleting and coating), testing and packing may then be re-exported to numerous other	Editorial	Moved to p. 75

destinations (including the country of origin). At the time of production of the seeds, the destination country and its phytosanitary import requirements may not be known, especially if a number of years pass between production and export to the final destination. ~~Moreover, breeding, selection and evaluation of seeds are conducted internationally to develop new varieties that are adapted to a range of environments and conditions.~~		
[82]PRAs for seeds performed in accordance with ISPM 2 (Framework for pest risk analysis), ISPM 11 (Pest risk analysis for quarantine pests) and ISPM 21 (Pest risk analysis for regulated non-quarantine pests) ~~and ISPM 32~~ should identify the regulated pests potentially associated with seeds and seeds as pests. The PRA should consider the purpose for which seeds are imported (e.g. research, planting, testing) and the probability of regulated pests establishing, spreading and causing economic impacts.	Technical	ISPM 32 does not provide guidance on PRA
[86]In the pest risk assessment of seeds as pathways, the element of probability of transfer to a suitable host needs further clarification.	Technical	Consistency with ISPM No.11.
[86]In the pest risk assessment of seeds as potential pathways for pests that should be regulated , the element of transfer to a suitable host needs further clarification.	Technical	Clarification
- [89]seed-transmitted pests that are carried internally or externally by the seed and directly infect the host plant developing from the seed ~~(1a)~~ (1a in Appendix 1) .	Substantive	see comment in p. 94
- [89]seed-transmitted pests that are carried ~~internally or externally~~ by the seeds internally or externally and ~~directly infect~~ are transmitted to the host plant ~~developing from the seed~~ causing their infestation (1a)	Technical	consistency with the definition of seed transmitted pest in p. 64
- [90]non-seed-transmitted pests that are carried by the seed and are transferred to the environment (e.g. water, soil) and then infect a host ~~(1b)~~ (1b in Appendix 1)	Substantive	see comment in p. 94
- [91] pests carried by the seed, either internally or externally, that do not transfer to a host ~~(1e)~~ (1c in Appendix 1) .	Substantive	see comment in p. 94
- [91]pests carried by the seed, either internally or externally, that do not transfer to a host under natural field conditions ~~(1e)~~ (1c in Appendix 1) .	Technical	Clarification
[92]There is a further category of pests that is relevant even though the pests are not seed-borne pests. This is the category of contaminating pests present in a seed lot (e.g. seeds of plants as pests) ~~(2)~~ (2 in Appendix 1) .	Substantive	see comment in p. 94
[93]Pests in categories 1a, 1b and 2 should be further assessed for establishment, spread and economic impact. Pests in category 1c cannot establish because they are not transferred to a suitable host.	Technical	Consistency with ISPM No.11.

[94]Examples of ~~pest under these categories 1a,1b,1c and 2~~ are provided in the Appendix 1:	Substantive	The examples are for reference be in an Appendix
[95]1a:	Substantive	see comment in p. 94
— [96]Potato spindle tuber viroid in seed of Solanum lycopersicum (tomato seed).	Substantive	see comment in p. 94
- [96]Potato spindle tuber viroid Tomato mosaic virus in seed of Solanum lycopersicum (tomato seed).	Technical	Tomato mosaic virus is a well-widely accepted pest of tomato can be transferred by seed.
- [97]Pea seed borne mosaic virus in seed of Pisum sativum (pea seed)	Substantive	see comment in p. 94
- [98]Squash mosaic virus in seed of Cucumis melo (musk melon seed)	Substantive	see comment in p. 94
- [99]Clavibacter michiganensis subsp. michiganensis in seed of Solanum lycopersicum (tomato seed)	Substantive	see comment in p. 94
- [100]Sitophilus oryzae (rice weevil) in seed of Oryza sativa (rice seed)	Substantive	see comment in p. 94
- [100]Sitophilus oryzae (rice weevil) in seed of Oryza sativa (rice seed)	Technical	Pest deleted because this is not a good example of pest. It is more associated to stored and therefore transmission is more related to storage condition.
- [101]Ditylenchus dipsaci on or in seed of Vicia faba (broad bean) and Medicago sativa (alfalfa)	Substantive	see comment in p. 94
- [102]Fusarium circinatum (Pitch canker) in seed of Pinus spp.	Substantive	see comment in p. 94
[103]1b:	Substantive	see comment in p. 94
- [104]Gibberella avenaceae on seed of Linum usitatissimum (linseed)	Substantive	see comment in p. 94
— [105]Tilletia indica on seed of Triticum aestivum (wheat seed)	Substantive	see comment in p. 94
- [106]Pythium spp. on seed of Cucumis sativus (cucumber seed)	Substantive	see comment in p. 94
- [106]Pythium spp. on seed of Cucumis sativus (cucumber seed)	Technical	It is not a good example, the seed is not a pathway for Pythium spp. on Cucumis sativus (See references ISF).
[107]Megastigmus sp. (chalcid wasp) on seed of Abies spp.	Substantive	see comment in p. 94
[108]1c:	Substantive	see comment in p. 94
- [109]Rice yellow mottle virus on seed of Oryza sativa	Substantive	see comment in p. 94
[110]Eggs and larvae of the family Bruchidae (e.g. Callosobruchus chinensis and C. maculatus)	Substantive	see comment in p. 94
[110]Eggs and larvae of the family Bruchidae (e.g.	Technical	Pest deleted because as

Callosobruchus chinensis and C. maculatus)		mentioned in Appendix 1, p.253 Bruchids are internal feeders with high probability of been present in seed.
[111]2:	Substantive	see comment in p. 94
- [112]Sclerotia of Sclerotium cepivorum in seed lots of Allium cepa (onion seed)	Substantive	see comment in p. 94
— [113]Cyperus iria in seed lots of Oryza sativa	Substantive	see comment in p. 94
[114]Mycosphaerella pini (Red band disease) in seed lots of Pinus spp.		
[116]Consideration of the biological and epidemiological characteristics of specific pest groups may help in determining the likelihood of a pest being introduced with seeds in an area. Guidance on the likelihood of pest groups being introduced with seeds is provided in Appendix 4 of this standard.	Substantive	see comment in p. 94
[123]Seeds imported for testing may be germinated to facilitate testing, but their purpose is not for planting. Requirements for laboratory testing or similar confinement and the destruction of the seeds and seedling should be sufficient as a phytosanitary measure.	Technical	The seedlings must be also Destroyed.
[124]1.3.2 Seeds for planting under quarantine post entry restricted conditions	Technical	Seeds are not imported to be planted under quarantine conditions; they are imported for planting under restricted conditions.
[125]Such seeds are imported under post-entry—quarantine restricted conditions conditions for research and growth in protected environments (e.g. glasshouses, growth chambers) or in isolated fields. These seeds should be planted under conditions that prevent the introduction of quarantine pests into the PRA area. Examples include seeds for evaluation, germplasm, and seeds as breeding material.	Technical	See comment p.124.
[137]1.5 Pest risk management in seed production	Technical	This item describes the production practices that should be considered when conducting the PRA, and could be recognized as phytosanitary measures
- [144]use of tested, healthy seed (free of regulated quarantine pests or regulated non-quarantine pest).	Technical	Clarification
- [162]timely seed harvest (e.g. just as seed matures, in mast years, from fruit at the pre-ripened stage)	Editorial	Clarification
- 165]seed sampling for sampling and testing to detect pests.	Editorial	Clarification
[176]A plant variety's level of resistance to different regulated pests may vary depending on the resistance traits present in the plant. Resistance genes may be effective against all or some specific races, strains, biotypes or pathotypes of the targeted pest but the emergence of new races or biotypes may affect the level of resistance. In addition, some pests may be present	Technical	Clarification

~~asymptotically~~ . Therefore, the pest resistance should be assessed on a case-by-case basis, as part of the PRA.		
[177]A suggested reference on the use of resistant varieties is provided in Appendix 2 3.	Editorial	see comment in p. 94
[188]Seed sample size should be ~~adequate~~ appropriate to detect regulated pests. It is necessary that NPPOs determine the detailed protocol for sampling and testing.	Technical	Clarification
[190]Field inspection may be a phytosanitary measure to detect some regulated pests that produce visible symptoms. ~~If harvested seed shows visual symptoms,~~ If field or harvested seed shows visual symptoms that suggest the presence of a regulated pest it should be tested to identify and confirm the presence of pests.	Technical	Clarification
2.5 Systems approach Systems approaches provide the opportunity to consider both pre and post-harvest procedures that may contribute to the effective management of pest risk. Many management practices to reduce pest problems throughout the seed production process from planting to post harvesting may be integrated in a systems approach. ISPM 14 provides guidelines for the development and evaluation of integrated measures in a systems approach as an option for pest risk management.	Technical	Text added because Systems approaches (ISPM N° 14) are an option of phytosanitary measure that should also be considered
[199]As part of post-entry quarantine, a sample of the seed lot may be sown and the resultant plants tested. (e.g. It can be an alternative of phytosanitary measure for the import of small lots for research).	Technical	Clarification
[208]For ~~organic~~ seeds (including organic) requiring ~~chemical~~ phytosanitary treatment, when a chemical is not authorized for use in the country of origin or export, the NPPO of the importing country should consider an alternative measure.	Technical	Clarification, because may be applied for all seeds and there are more treatments than chemical.
[209]4. Specific Requirements These specific requirements, refers actions for phytosanitary certification or verification at entry.	Editorial	Text added to clarify the purpose of Section 4.
[222]Testing of samples that are taken in accordance with ISPM 31 from small lots may result in the destruction of a large proportion of the lot. In such cases, ~~sampling alternatives~~ alternative sampling methodologies or equivalent phytosanitary procedures should be considered by the NPPO of the importing country, as per the guidance in ISPM 24.	Technical	Clarification
[227]The ~~principles of~~ guidance for diagnostic protocols are described in ISPM 27 (<i>Diagnostic protocols for regulated pests</i>) and adopted protocols are provided as annexes to ISPM 27. Information on other protocols can be found in the sources listed in Appendix 2 of this standard.	Technical	Consistency with ISPM N°27.
[227]The principles of diagnostic protocols are described in	Editorial	see comment in p. 94

ISPM 27 (<i>Diagnostic protocols for regulated pests</i>) and adopted protocols are provided as annexes to ISPM 27. Information on other protocols can be found in the sources listed in Appendix 2 3 of this standard.		
[229] Ideally, a detection method that detects only viable pests should be used to determine treatment efficacy, so that a negative test result indicates the treatment has been successful. Examples are techniques for the detection of bacteria and fungi where bacteria or the mycelium will grow on the substrate (i.e. media or blotters), and techniques for the detection of viruses where the seeds are sown and symptoms observed on emerging plants.	Editorial	Clarification
[229] Ideally, a detection method that detects only viable pests should be used to determine treatment efficacy, so that a negative test result indicates the treatment has been successful. Examples are techniques for the detection of bacteria and fungi where bacteria or the mycelium will grow on the substrate (i.e. media or blotters), and techniques for the detection of viruses where the seeds are sown and symptoms observed on emerging plants. Most established seed health testing methods have been developed and validated for use on untreated seed. If treated seed is to be tested it should only be done whe a test method has been fully validated for treated seed.	Technical	Text added for clarification and related with paragraph 234.
[231] The treatment inactivates the pest but the detection method detects both viable and non-viable pests. This may be the case with some serological or molecular tests or when detection is based on morphological identification of pests or pest structures that may remain even after treatment (e.g. nematodes, spores). In such cases, determination of the efficacy of the treatment ~~may be inconclusive.~~ can only be conclusive if a validated test for treated seed is used.	Technical	Better understanding.
[233] The treatment adversely affects the detection method; for example, a method detects only pests present externally and any pests remaining internally after treatment cannot be detected. In these situations, other detection methods that are able to detect internal infection should be used (e.g. <i>Xanthomonas campestris</i> pv. <i>campestris</i> on the surface of seeds may be eliminated by disinfection ~~cannot be detected externally if the surface of the seeds have been washed for disinfection~~ but detection of internal infection may require seeds to be ~~may be detected after the seeds have been ground to expose their internal parts).~~	Technical	Better understanding.
~~[234]The treatment causes false positive, false negative or unreadable results by serological or molecular detection methods. For false negative and unreadable results, preliminary testing should be conducted to verify the detection method: an untreated sample from the same seeds (where no treatment is applied to suppress or inactivate the target pest) or positive control (i.e. a pure culture with the target pest added to the seed~~	Technical	See text added p. 229

extract) should be tested using the same detection method.		
[235]5. ~~Phytosanitary Certification~~ Re-export of seeds.	Technical	Clarification: Phytosanitary certification includes inspection, testing, etc. all the content of section 5 refers to re export.
[237]NPPOs are encouraged to exchange additional official phytosanitary information at export certification with other NPPOs to enable certification for re-export of seeds, as described in ISPM 12. Additional official phytosanitary information, which is not required by the first country of import, may be included on the phytosanitary certificate for export issued by the country of origin when so requested by the exporter in order to facilitate future re-export to other countries (ISPM 12).	Technical	Consistency with ISPM N° 12.
[243]APPENDIX ~~4~~ 2: Guidance on the likelihood of pest groups being introduced with seeds	Editorial	see comment in p. 94
[245]There is limited, and at times conflicting, information available regarding the seed transmission of pests ~~other than insects~~ . In addition, a pest that has been proven to be seed-transmitted in one host is not necessarily seed-transmitted in all known hosts. Factors such as the capability of a host to support transmission or the level of host infection before seed formation should be considered.	Editorial	Paragraph for all the pest.
[255] ~~Stored product arthropods can infest seeds after harvest, particularly if the seeds are stored in poor conditions (e.g. in high moisture, with previously stored seeds). Good storage conditions, as generally applied for high value seeds, will greatly decrease or remove the likelihood of stored product arthropods feeding on seeds.~~	Substantive	Arthropods need more best examples. Stored product arthropods it is not a good example because commercial seeds has good storage conditions. This pest is more common in grain, and also there are a few quarantine pest.
[256] ~~Stored product arthropods that are external feeders have a low probability of being present in seed consignments. Arthropods that feed on but are not attached to external parts of seeds may destroy the seed and may pose a risk as contaminating pests. Secondary pests (e.g. <i>Mycetophagus</i> spp., <i>Acarus</i> spp., <i>Liposcelis</i> spp.) may also be present when there is poor sanitation or excessive extraneous matter. Other storage organisms may also be present in poor storage conditions.~~	Substantive	In this paragraph are cited examples of pests from bad storage conditions. There is international confusion with such pests regarding it are quality requirement because the insects destroys the seed or a phytosanitary requirements (quarantine pests).
[257] ~~Stored product arthropods that are internal feeders have a high probability of being present in seed consignments. Arthropods that feed on internal parts of seeds can infest seeds if they are left exposed before packaging.~~	Substantive	See comment in p. 255
[272] ~~If seeds are determined to be a pathway for the introduction and spread of regulated pests, phytosanitary measures may be considered during the pest risk management stage of the PRA~~	Technical	Redundant

[273]APPENDIX-2 3: Bibliography	Editorial	See comment p. 94
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