Submission form for topics for Standards and Implementation

*(Updated by the IPPC Secretariat 2018-04-27)*

Name of Country or Organization: **Caribbean Agricultural Health and Food Safety Agency (CAHFSA)**

Introduction

In Accordance with CPM-13 decision, a combined call for topics for standards and tools for implementation is opened in 2018. IPPC contracting parties and RPPOs are invited to submit proposals for topics to be included as gaps in the Framework for Standards and Implementation for consideration to be put onto the IPPC work programme. Each submission should clearly define the problem needing resolution in sufficient detail to determine how it fits into the Framework for Standards and Implementation and the cost/benefit of the development of the standard or tool. Submitters are requested to consult the current IPPC Framework for Standards and Implementation (<https://www.ippc.int/en/publications/82439/>) to identify areas where the proposal can contribute.

Standards

This form covers submissions for new ISPMs, new components to an existing ISPM and revision or amendments to an ISPM, supplement, annex or appendix, including diagnostic protocols. Please note that a separate call for phytosanitary treatments (PTs) is made, more information on this call is available at <https://www.ippc.int/en/core-activities/standards-setting/calls-treatments/>.

Please refer to the IPPC Standard Setting Procedure Manual[[1]](#footnote-1) for an explanation of the hierarchy of terms for standards (technical area, topic and subject). The list of topics for IPPC standards adopted by the CPM is available at <https://www.ippc.int/core-activities/standards-setting/list-topics-ippc-standards>.

Implementation

This form covers submissions for new IPPC implementation resources for implementation of the Convention, ISPMs and CPM recommendations or for revisions to IPPC implementation resources. Please refer to the IPPC Framework for Standards and Implementation on implementation resources that have been adopted/developed, are under development or are planned to be developed.

Submission

This completed form should be submitted by the IPPC official contact point, preferably via e-mail, to the IPPC Secretariat (ippc@fao.org) no later than **31 August 2018**. Please use one form per topic.

An electronic version of this form is available at <https://www.ippc.int/en/core-activities/standards-and-implementation/call-for-topics-standards-and-implementation/>.

Save and submit the completed submission form as:

2018\_TOPIC\_ *[Country or organization name – Proposed title of topic]*.docx.

 (Text in brackets given for explanatory purposes)

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| **Submission form for topics for Standards and Implementation** |
| 1. **Proposed by**: Juliet Goldsmith
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| 1. **Contact:**

Name: **Juliet Goldsmith** Position and organization: **Plant Health Specialist, Caribbean Agricultural Health and Food Safety Agency (CAHFSA)**Mailing address: **Letitia Vriesdelaan 10, Paramaribo, Suriname** Phone: **+597-725-2922** Fax: E-mail**: juliet.goldsmith@cahfsa.org**  |
| 1. **Proposed Topic (Choose one box only)**

[X\_] Standard **(go to 4)** \_\_] Implementation resource **(go to 5)** |

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| 1. **Standards**
	1. **Type of topic: (Choose one box only)**
 |
| A. New ISPM:[\_\_] Concept[\_\_] Pest specific[\_\_] Commodity specific[\_\_] Reference | B. New component to an existing ISPM:[\_\_] Supplement[\_\_] Annex[\_\_] Appendix[\_\_] Technical panel (technical area)[X] Diagnostic protocol (subject) | C. Revision/Amendment of:[\_\_] ISPM[\_\_] Supplement[\_\_] Annex[\_\_] Appendix |
| **Draft specification:**  As agreed by CPM-7 (2012) and CPM-11 (2016), submissions in answer to the call for topics (**except for draft diagnostic protocols**, which are subject to additional criteria, see below) should be accompanied by a draft specification. Proposals for phytosanitary treatments are submitted using a different submission form in a separate call: <https://www.ippc.int/en/core-activities/standards-setting/calls-treatments/>.An annotated template for the draft specification for Standards is available on the IPP (<https://www.ippc.int/en/publications/81324/>) in English, French and Spanish. **(go to 6)** |

**OR**

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| 1. **Implementation**
	1. **Type of topic: (Choose one box only)**
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| 1. New implementation resource:

[\_\_] Guide (e.g. Manual)[\_\_] Training material (e.g. e-Learning)[\_\_] Awareness material[\_\_] Other (Please specify)  | 1. Revision of implementation resource

[\_\_] Guide (e.g. Manual)[\_\_] Training material (e.g. e-Learning)[\_\_] Awareness material[\_\_] Other (Please specify)  |
| * 1. Featured Convention articles, ISPMs and CPM recommendations in the proposed implementation resource

[\_\_] for Convention articles (Please specify) [\_\_] for ISPM (Please specify) [\_\_] for CPM Recommendation (Please specify)  |
| **Draft outline:**  Submissions for topics on implementation should be accompanied by a draft outline of implementation resource defining a scope and purpose, or a draft implementation resource. Commitment for financial/in-kind resources to support the development of the implementation resource may be included in the submission (non-obligatory).**(go to 6)** |

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| 1. **Proposed title of document**

*Diagnostic Protocol for Regulated Pest: Mononychellus tanajoa* |
| 1. **Proposed priority**

 [\_\_] 1 (high) **[\_X**\_] 2 [\_\_] 3 [\_\_] 4 (low) Comments: |
| 1. **Featured outcome of standard/implementation resource**

*ISPM 27 notes that proper pest detection and pest identification are crucial for the appropriate application of phytosanitary measures…. In particular, contracting parties need proper diagnostic procedures for determination of pest status and pest reporting (ISPM 8 (Determination of pest status in an area); ISPM 17 (Pest reporting)), and the diagnosis of pests in imported consignments (ISPM 13 (Guidelines for the notification of non-compliance and emergency action)).**Implementation of the proposed diagnostic protocol will assist NPPOs in accurately identifying Mononychellus tanajoa and determining its status within their border. It should assist in facilitating trade among Contracting parties, especially those who are currently unsure of the which species of Mononychellus is present in their countries and in that of their trading partners.*  |
| **9. Contribution to filling the gaps of the Framework for Standards and Implementation:** (2 lines max) *The proposal addresses the Framework for Standards and Implementation gap # 74, Annex to Diagnostic protocols for regulated pests (ISPM 27): Mononychellus tanajoa*  |
| **10. Summary of justification for the proposal** (2 lines max)*The cassava green mite, Mononychellus tanajoa is a regulated organism for many IPPC contraction parties. However, there is a need to clarify issues relating to its identification and to separate it from M. Caribbeaneae and M. progresivus* |

**Criteria for justification and prioritization of proposed topics[[2]](#footnote-2):**

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| Submissions should address the applicable criteria for justification of the proposal (as listed below). Where possible, information in support of the justification and that may assist in the prioritization should be indicated. All core criteria must be addressed; supporting criteria should be addressed if applicable.Priority will be given to topics with the largest global impact. |
| **Core criteria (must provide information. It is expected that all submissions meet the following core criteria)** |
| Contribution to the purpose of the IPPC as described in article I.1.This proposed diagnostic protocol provides guidance to NPPOs on the detection and identification of a regulated pest for the purpose of providing common and effective action to prevent the spread and introduction of pests moving internationally. The ability to accurately identify the organism allows for the development and promotion of appropriate measures for their control |
| Linkage to IPPC Strategic Objectives (SOs) and Organizational results demonstrated.*Supports IPPC Strategic Objectives A: Food Security, B: Environmental Protection, C: Trade Facilitation* |
| Feasibility of implementation at the global level (consider ease of implementation, technical complexity, capacity of NPPO(s) to implement, relevance for more than one region).*Mononychellus tanajoa is as serious pests of Manihot esculanta, an important crop in Africa, Asia and Latin America. This pest can be identified using molecular and morphology information. The necessary tools and expertise to implement the standard are available to most NPPOs.*  |
| Clear identification of the problems that need to be resolved through the development of the standard or implementation resource.*The diagnostic protocol should address the detection and identification of the Acari species, Mononychellus tanajoa, with precise information on the differences between this species and other species of Mononychellus affecting Manihot esculanta (Cassava)* |
| Availability of, or possibility to collect, information in support of the proposed standard or implementation resource (e.g. scientific, historical, technical information, experience).Mononychellus tanajoa has been prominent in the scientific literature since its accidental introduction into Africa in 1972 with devasting consequences. More recently, M. tanajoa was introduced into Asia and has since become a major pest in the cassava regions. As such, several papers have been published on its management, biology and identification.  |

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| **Supporting criteria (information may be provided, as appropriate):** |
| **Supporting criteria (Practical)**1. Is there a regional standard and/or implementation resource on the same topic already available and used by NPPOs, RPPOs or international organizations?
2. Availability of expertise needed to develop the proposed standard and/or implementation resource.

 Experts are available in the United States, Asia, Europe and Latin America.  |
| **Supporting criteria (Economic)**1. Estimated value of the plants protected.

*Cassava, Manihot esculanta, is the third most important source of calories in the tropics, after rice and maize. Millions of people depend on cassava in Africa, Asia and Latin America. The crop is an essential part of the diet of more than half a billion people and provides a livelihood for millions of farmers, and many processors and traders worldwide. Almost 60 percent of world production is concentrated in five countries Nigeria, Brazil, Thailand, Indonesia and the Congo Democratic Republic*.1. Estimated value of trade including new trade opportunities affected by the proposed standard and/or implementation resource (e.g. volume of trade, value of trade, the percentage of Gross Domestic Product of this trade) if appropriate.

*World trade in cassava products, excluding trade among EU countries, presently stands at about 12 percent of global production. Thailand, Vietnam and Indonesia are the major suppliers of cassava to the world market, the former contributing some 80 percent and the latter two countries around 8 percent of total trade, while the remainder is provided by small exporters in Africa, Asia and Latin America, including Ghana, Madagascar, Nigeria, Tanzania, China, Vietnam and Brazil.* |
| **Supporting criteria (Environmental)**1. Utility to reduce the potential negative environmental consequences of certain phytosanitary measures, for example reduction in global emissions for the protection of the ozone layer.
2. Utility in the management of non-indigenous species which are pests of plants (such as some invasive alien species).
3. Contribution to the protection of the environment, through the protection of wild flora, and their habitats and ecosystems, and of agricultural biodiversity.
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| **Supporting criteria (Strategic)**1. Extent of support for the proposed standard and/or implementation resource (e.g. one or more NPPOs or RPPOs have requested it, or one or more RPPOs have adopted a standard on the same topic).

*Mononychellus tanajoa is listed among the top ten priority pests for the Caribbean Region. The NPPOs of the region agree that a diagnostic protocol for this organism is needed.* 1. Frequency with which the issue to be addressed, as identified in the submission emerges as a source of trade disruption (e.g. disputes or need for repeated bilateral discussions, number of times per year trade is disrupted).
2. Relevance and utility to developing countries.

The host crop for this pest is a staple for many developing countries and so the standard would be most useful to them. 1. Coverage (application to a wide range of countries/pests/commodities).
2. Complements other standards and/or implementation resources (e.g. potential for the standard to be used as part of a systems approach for one pest, complement treatments for other pests).
3. Conceptual standard and/or implementation resource to address fundamental concepts (e.g. treatment efficacy, inspection methodology).
4. Urgent need for the standard and/or implementation resource.
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| **Diagnostic protocols are subject to additional criteria. For proposals for DPs, please elaborate on the following criteria to help the future consideration of the subject proposed:*** Need for international harmonization of the diagnostic techniques for the pest (e.g. due to difficulties in diagnosis or disputes on methodology)

*There has been some confusion regarding the species called Cassava Green Mite (CGM), which may include Mononychellus tanajoa, M. Caribbeaneae and M. progresivus. The cassava green mite of the genus Mononychellus was accidentally introduced into Africa from South America in the early 1970s and was identified as M. tanajoa. This designation was given to all CGM collected in Africa for several years until the discovery in Nigeria of M. progresivus. Some confusions ensued, thereafter, with some authors referring to the Mononychellus complex. This issue was further compounded by the realisation that characters used as a criterion for distinguishing the species vary considerably from one strain to another and even between specimens of the same strain.**There seem to be a consensus among some authors that the CGM introduced into Africa is M. progresivus, while others maintain that until, and unless, distinct species can be demonstrated, the cassava green mite in Africa should be described as M. tanajoa** Relevance of the diagnosis to the protection of plants including measures to limit the impact of the pest.

*The CGM is an invasive species that cause serious damage to cassava and can result in losses of up to 80% in yield. The symptoms produced (chlorosis of the young leaves, followed by defoliation of young leaves) can be confused in the field with those produced by Phenococcus manihoti (cassava mealybug) and by the African Mosaic Virus (ACMV). In addition, less harmful members of the family Tetranychidae are found on cassava. Being able to accurately identify the presence of CGM is critical to effective management** Importance of the plants protected on the global level (e.g. relevant to many countries or of major importance to a few countries).

*Manihot esculanta, is the third most important source of calories in the tropics, after rice and maize. Millions of people depend on cassava in Africa, Asia and Latin America. The broad agro-ecological adaptability of cassava and its ability to produce reasonable yields where most crops cannot make it the basis for food security at the household level and an important source of dietary energy. The crop is an essential part of the diet of more than half a billion people and provides a livelihood for millions of farmers, and many processors and traders worldwide. Almost 60 per cent of world production is concentrated in five countries Nigeria, Brazil, Thailand, Indonesia and the Congo Democratic Republic*.* Volume/importance of trade of the commodity that is subjected to the diagnostic procedures (e.g. relevant to many countries or of major importance to a few countries).

*World trade in cassava products, excluding trade among EU countries, presently stands at about 12 per cent of global production. The bulk consists of pellets and chips for feed (60 per cent) and the balance of starch and flour for food and industrial uses. Trade in fresh cassava is rather limited because of the bulkiness and perishability of the roots. As a result, it is mostly confined to exchanges between bordering countries. Thailand, Vietnam and Indonesia are the major suppliers of cassava to the world market, the former contributing some 80 percent and the latter two countries around 8 percent of total trade, while the remainder is provided by small exporters in Africa, Asia and Latin America, including Ghana, Madagascar, Nigeria, Tanzania, China, Vietnam and Brazil.** Other criteria for topics as determined by CPM that are relevant to determining priorities

*A diagnostic protocol for Mononychellus tanajoa is included as a gap in the Framework for Standards and Implementation.** Balance between pests of importance in different climatic zones (temperate, tropics etc.) and commodity classes.

*M. tanajoa originated in the neotropics and thrived best under tropical conditions, including high temperatures and relative humidity. The host is a tropical crop requiring eight months of warm temperatures to produce a crop** Number of labs undertaking the diagnosis.

*While there are no specific data available on the number of labs undertaking diagnosis, the scientific literature suggests that a number of authors are looking specifically at intra-species diversity as well as phylogenetic diversity of the cassava green mite. Due to the challenges with morphological identifications, most laboratories are looking to molecular methods** Feasibility of production of a protocol, including availability of knowledge and expertise.

*Production of a protocol to identify M. tanajoa is feasible using molecular and morphology information. Detection and identification of the pest in its native range is possible, and experts in USA, Europe, Asia and Latin America would be able to develop a protocol. The process, however, would become very challenging if the distribution in Africa became a factor* |
| **Literature review**[[3]](#footnote-3) (This section will provide a **summary of the topic** based on scientific and technical publications, including a referenced **list of literature reviewed**. This will help provide the scientific basis for the content of the standard/implementation resource to be used by the selected experts during the development of the standard/implementation resource)**.***Mononychellus tanajoa (cassava green mite), is an important pest of cassava and related Manihot species (Nyiira 1973). Cassava green mites originated in South America and were most likely transported to Africa on cassava cuttings in about 1970. M. tanajoa first appeared in Uganda in 1971, and by 1985 it had dispersed to 27 countries within the cassava belt (Bellotti et al. 1999). More recently, M. tanajoa was introduced into Asia. It was reported in China in 2010 and has since become a major pest in the cassava regions of Hainan (Lu et al. 2012). It contributes to reduced root size, poor root quality and late root formation (Byrne et al. 1982).**There has been some confusion in the taxonomy of this species. The cassava green mite (GCM)which was introduced into Africa was identified as M. tanajoa. This designation was given to all CGM collected in Africa for several years until the discovery in Nigeria of M. progresivus. Some confusions ensued, thereafter, with some authors referring to the Mononychellus complex. This issue was further compounded by the realisation that characters used as a criterion for distinguishing the species vary considerably from one strain to another and even between specimens of the same strain (Gutierrez 1987).* *There seems to be a consensus among some authors that the CGM introduced into Africa is M. progresivus, while others maintain that until, and unless, distinct species can be demonstrated, the cassava green mite in Africa should be described as M. tanajoa.****References*** *Bellotti, A.C., Smith, L., and Lapointe, S.L. (1999). Recent advances in cassava pest management. Annual Review of Entomology 44: 343-370.**Byrne, D.H., Bellotti, A.C., and Guerrero, J.M. (1983). The cassava mites. Tropical Pest Management 29: 378-394.**Gutierrez, J. (1987). The cassava green mite in Africa: one or two species? (Acari, Tetranychidae). Experimental and Applied Acarology 3: 163-168.**Lu, H., Ma, Q., Chen, Q., Lu, F., and Xu, X. (2012). Potential geographic distribution of the cassava green mite Mononychellus tanajoa in Hainan, China. African Journal of Agricultural Research 7: 1206-1213.**Rogo, L.M., Oloo, W., Nokoe, S., and Magalit, H. (1988). A study of the Mononychellus (Acari, Tetranychidae) species complex from selected cassava growing areas of Africa using principal component analysis. Insect Science and Its Application 9: 593-599.**Nyiira, Z. (1973). Bioecological studies on the cassava mite Mononychellus tanajoa (Bondar) (Acarina: Tetranychidae). In: Proceedings of the 3rd Symposium of the International Society for Tropical Root Crops. pp. 415-418.* |

**Send submissions to:** **Address:** IPPC Secretariat (AGDI)

**E-mail:** ippc@fao.org Food and Agriculture Organization of the UN

(Subject line: “Call for topics 2018”) Viale delle Terme di Caracalla

 00153 Rome, Italy

1. IPPC Standard Setting Procedure Manual URL: <https://www.ippc.int/en/publications/85024/> [↑](#footnote-ref-1)
2. As agreed by CPM-13 (2018) [↑](#footnote-ref-2)
3. As agreed by CPM-7 (2012) and CPM-11 (2016). [↑](#footnote-ref-3)