Farewell to Pati Abad - U.S. Representative to NAPPO

Pati Abad has represented the U.S. Plant Protection & Quarantine (PPQ) at NAPPO for nearly six years. Over this time, she represented the United States on the NAPPO Advisory and Management committee, directed and coordinated U.S. experts appointed to different NAPPO working groups, and has contributed significantly to making NAPPO a strong, strategically relevant organization. Beginning July 6, 2021 Pati will start a new job with PPQ’s Phytosanitary Issues Management team (PIM) as a Senior Assistant Trade Director for the Western Hemisphere. There she will be supervising and managing technical trade and market access issues.

Pati has been superb in managing the technical and strategic aspects of her job as well as a highly personable and trusted representative who has strengthened relationships among counterparts and colleagues from across the region, including Canada, Mexico, industry stakeholder groups, the NAPPO Secretariat, and employees throughout the PPQ organization. Everyone likes working with Pati. We will miss her, but we also share her excitement about taking on a new challenge for the Agency. I believe her NAPPO experience will enhance her effectiveness in her new trade position and help bring the world of NAPPO standards and safeguarding concepts into the trade arena.

With Pati’s departure, Ms. Stephanie Dubon will be the Acting PPQ Technical Director for NAPPO for the next six months. Stephanie brings a tremendous amount of international experience with the IPPC and standard setting in general, in-depth knowledge of PPQ programs and people, and several years of serving as back-up on NAPPO issues. I am confident that she will hit the ground running. Stephanie contact information is: Stephanie.M.Dubon@usda.gov, desk: 301-851-2180, cell: 301-332-9071.

Again, I want to publicly acknowledge and commend Pati for her awesome contributions to the work and mission of NAPPO and wish her the very best success in her new appointment.

John K Greifer  
Assistant Deputy Administrator  
USDA-APHIS-PPQ
Time to mark your calendars! The 44th NAPPO Annual Meeting is only four months away. Scheduled for November 3-5, 2021, the meeting will be held virtually. NAPPO’s goals for this year’s virtual Annual Meeting are to ensure a compelling agenda, to provide easy access to the meeting by all participants, and to ensure that all participants are kept informed of NAPPO accomplishments and initiatives.

The Annual Meeting webpage is now live. You can view them by selecting the 2021 NAPPO Annual Meeting logo from the NAPPO website homepage, www.nappo.org. The meeting webpage includes the latest version of the Draft Agenda; the invitation letter from our host country, the United States; and coming soon the registration link.

During this year’s Annual Meeting, each Executive Committee representative will deliver a country update and each Expert Group will report on their work towards fulfilling the NAPPO strategic plan objectives. Stakeholders will also have the opportunity to participate in government and industry sessions by country. In addition, the theme for this year’s Knowledge Topic during the first day of the meeting will be on “Emerging phytosanitary issues facing North America”.

Friday, November 5 will feature a 2-hour Seminar, on “Opportunities and Challenges in the use of Systems Approaches as Sustainable Risk Management Tools for the Future”. A systems approach refers to a pest risk management option that integrates different measures, at least two of which act independently, with cumulative effect. Systems approaches offer more flexibility and opportunities to employ equivalent measures as alternatives to single measures (e.g. treatment) or facilitate risk management when single measures may not exist. At the same time, in a world that is looking for risk management options that are scientifically sound but also environmentally and cost friendly, systems approaches may offer practical alternatives, especially as the use of other tools are potentially phased-out.
The objectives of the seminar are to:

- Explore the international framework for systems approaches and its harmonization value.
- Highlight existing systems approach programs in NAPPO countries and discuss their benefits and challenges.
- Discuss the intersection between systems approaches and the strength of measures concept.
- Present industry experiences and best practices in relation to systems approaches.
- Examine the future of systems approaches.

The seminar will feature presentations from all three NAPPO countries and seeks to build on industry and NPPO experiences and best practices on systems approaches as sustainable risk management tools for the future.

Visit www.nappo.org for the latest information, and make sure to check the website and meeting agenda regularly for updates. “See” you there!

Stephanie Dubon, USDA-APHIS-PPQ-IPS

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2021 NAPPO Work Program

Despite the pandemic, the first half of 2021 was highly productive for NAPPO. Four projects were completed and five documents were sent-out for country consultation. NAPPO will continue to deliver and progress the 2021 work program in the second half of the year in collaboration with subject matter experts from all three NAPPO countries. This includes 14 ongoing programs/activities as well as a new project on harmonization of Quality Management terminology.

Advancing the 2021 work program during the second half of 2021 includes:

- Complete, sign and approve the five documents sent for country consultation.
- Draft the Terms of Reference for the ring test of diagnostic protocols for the detection of Tomato Brown Rugose Fruit Virus (ToBRFV) for review and approval by the NAPPO Executive Committee.
- Draft the guidance document on the harmonized implementation of ISPM 25 (Consignments in-transit).
- Continue reporting official pest reports and emerging pest alerts through the NAPPO Phytosanitary Alert System web-based platform.
- Continue development of Risk-Based sampling tools and materials.
- Continue revision and update of NAPPO foundational documents.
- Continue strengthening collaboration with international organizations including EPPO and RPPOs in the Americas.
- Deliver the first NAPPO virtual annual meeting November 3-5, 2021 (See article in this newsletter issue).
- Continue updating NAPPO governance documents that reference the new NAFTA 2.0 in collaboration with the NAPPO AMC and trade representatives from each NAPPO country.
- Progress discussions on quality management terminology as amendments to RSPM 5 (NAPPO Glossary of phytosanitary terms).
- Continue coordination of activities of the Inter-American Coordinating Group in Plant Protection (GICSV in Spanish).
- Continue outreach activities on NAPPO and IPPC activities and initiatives.
- Continue supporting the North American Sea Container Initiative (NASCI) in raising awareness on the importance of Sea Container cleanliness.

2021 NAPPO Country Consultation and Call for New Project Proposals

As you are aware, through the hard work and dedication of our NAPPO Expert Groups, the Secretariat was able to edit, format, translate and launch five NAPPO products for Country Consultation in mid-May. They are listed below for easy reference:

1. **Revision of NAPPO Regional Standard for Phytosanitary Measures 35 - RSPM 35** – Guidelines for the movement of propagative plant material of stone fruit, pome fruit and grapevines into a NAPPO Member Country.

2. **Revision of NAPPO RSPM 22** – Guidelines for construction and operation of a containment facility for insects and mites used as biological control agents.

3. **Revision of NAPPO RSPM 38** – Importation of certain wooden and bamboo commodities into a NAPPO Member Country.

4. **NAPPO Position Document** - Asian Gypsy Moth (AGM) specified risk periods in Japan, Russia, Republic of Korea, and China.

5. **NAPPO Science and Technology Document** – Contaminating organisms affecting trade in wood commodities and forestry products.

As you know, the documents and instructions on how to comment are found here - [https://nappo.org/english/country-consultation-2021](https://nappo.org/english/country-consultation-2021). Hopefully, you have already downloaded and read the documents and are in the process of making your comments and suggested edits for consideration by the different Expert Groups. I know they very much value your input! Depending on the feedback and comments received from stakeholders, we may be able to have the NAPPO Executive Committee formally approve these five documents before the end of 2021!! This would allow NAPPO to consider the addition of several new projects to the Work Program in 2022.

Speaking of new projects, please mark your calendars! As we informed you back in March, the 2021 call for new NAPPO project
proposals will open on November 15, 2021. The call will be open for 90 days. You are encouraged to propose new projects for NAPPO that are of specific interest to your area of expertise/industry and that will promote harmonization of plan health activities in North America.

Please access the instructions as well as the NAPPO Project Proposal fillable form here - https://nappo.org/english/nappo-forms/project-proposals.

Aligning NAPPO Documents with the new NAFTA 2.0

The members of the NAPPO Advisory and Management Committee (Steve Côté, CFIA, Pati Abad, APHIS-PPQ, Ana Lilia Montealegre, SENASICA-DGSV, Alonso Suazo and Stephanie Bloem, NAPPO Secretariat) have been diligently working to align several key NAPPO documents with the new NAFTA 2.0 (also known as CUSMA in Canada, USMCA in the United States and T-MEC in Mexico) language, provisions and roles and responsibilities. The AMC made good progress on proposed edits and the documents were then provided to trade experts in the NAPPO region for their review and input. We wanted to inform you that we are close to completing the document updates.

As such, we would like to take this opportunity to gratefully acknowledge the contributions made by the following NAFTA 2.0 subject matter experts:

- Annie Bourque, Deputy Director- Trade Agreements Division, CFIA
- Hussein Hussein, Policy Analyst- Trade Agreements Division, CFIA
- Kim Meegan, Deputy Director, Americas Division, CFIA
- Nelly Denis, Senior Policy Analyst, Americas Division, CFIA
- Lynn Alfalla, SPS Policy Director for the Western Hemisphere, APHIS-International Services (IS) Trade Support Team
- Eric Nichols, Director of the APHIS-International Services (IS) Trade Support Team
- Sergio Iván Balderas Rodríguez, Subdirector de Disciplinas de Comercio Internacional, Subsecretaría de Comercio Exterior
Update on the North American Sea Container Initiative (NASCI)

To protect North American agriculture, forestry, and natural resources against the introduction of invasive pests, the United States Department of Agriculture (USDA) and the Canadian Food Inspection Agency (CFIA) began working with U.S. and Canadian border protection agencies, shippers, and global shipping companies to develop common-sense guidance for cleaning and inspecting sea containers. This cooperative effort is known to all NAPPO stakeholders as the North American Sea Container Initiative (NASCI).

The NASCI has its own dedicated webpage on the NAPPO website. You can access all their guidance and information here - https://nappo.org/english/north-american-sea-container-initiative.

We wanted to inform you that our colleagues from Mexico have joined the ranks of NASCI regulatory agencies working on container cleanliness and inspection. The May 2021 NASCI virtual meeting, had active participation of several colleagues from SENASICA including Francisco Ramírez y Ramírez, Director of the Mexican NPPO and member of the NAPPO Executive Committee. We would like to take this opportunity to acknowledge and formally welcome the following SENASICA colleagues - Victor Manuel Gutierrez Palomares, Rubén Gaona López, Alverto Prado Hernández and Eduardo Mendoza Lozano - to the NASCI family!
NAPPO Governance Meetings

As follow-up to the article in our March newsletter, the NAPPO Secretariat wanted to inform you that throughout 2021, the NAPPO Advisory and Management Committee (AMC) continues to hold virtual meetings – once every 3 weeks – to ensure that issues related to the NAPPO work program, project deliverables, country consultation, annual meeting and other issues are addressed/resolved in a timely matter. As for governance meetings with the Executive Committee and Industry Advisory Group, we are currently gearing-up for the summer NAPPO Management Team (NMT) meeting – scheduled for July 15th with a preparatory AMC meeting on July 13th. Agenda topics identified for the summer NMT meeting include – key updates from Government and Industry; status update on the 2021 NAPPO Work Program, including products that are out for Country Consultation; and updates on: the preparation and logistics for the 2021 Annual Meeting; the review and harmonization of key NAPPO documents with the recently ratified NAFTA 2.0, the business processes of the NAPPO Secretariat and on International Organizations and initiatives including the IPPC Bureau, Standards Committee, Implementation and Capacity Development Committee, IPPC call for topics, ePhyto and the Sea Container Task Force, among others. Finally, the Executive Committee will conduct the performance appraisal for the Executive Director as she is completing her second 3-year term directing NAPPO.

We have also identified tentative dates for the winter NMT meetings which will be split into pre- and post- Annual Meeting virtual meetings and will take place the weeks of October 27th and November 8, 2021, respectively.

International Plant Health Standards: Snapshot of IPPC Standard Setting Activities in 2021

Below is a snapshot of key standard-setting activities and initiatives taking place in IPPC during 2021. They include standards adopted by the Commission on Phytosanitary Measures (CPM) and drafts standards approved for Consultation in 2021.
ISPMs Adopted by CPM in March 2021:

Revision of ISPM 8 - (Determination of pest status in an area) - This standard addresses the quality of information used by NPPOs to determine pest status in their territory and outlines the use of pest records and other information to determine pest status in an area. It describes pest status categories and provides guidance on how pest interceptions can affect the interpretation of pest status.

ISPM 45 - Requirements for NPPOs if authorizing entities to perform phytosanitary action - This standard provides key requirements for developing an NPPO authorization program if they decide to authorize third parties to perform specific phytosanitary actions on their behalf. These actions could relate to various NPPO functions but exclude issuance of phytosanitary certificates (PC). It also outlines eligibility criteria for third parties to become authorized and identifies the roles and responsibilities of the parties involved in the implementation of an authorization program.

ISPM 44 - Requirements for the use of modified atmosphere treatments as a phytosanitary measure - This is a new standard which provides technical guidance to NPPOs on the application of modified atmosphere treatments as phytosanitary measures. The standard is operational in nature and does not provide details on specific treatment schedules. It outlines the general procedures and principles to ensure an efficacious and acceptable use of modified atmosphere treatments, regardless of the commodity.

Amendments to ISPM 5 - (Glossary of phytosanitary terms) - Updates some key plant health terms to ensure a common understanding and harmonized application of phytosanitary concepts.

Phytosanitary Treatments adopted as Annexes to ISPM 28 - (Phytosanitary treatments for regulated pests):
- Cold treatment of Ceratitis capitata and Bactrocera tryoni on Vitis vinifera, Prunus avium, P. domestica, and P. persica
- Irradiation treatment for Bactrocera dorsalis, Carposina sasakii and the genus Anastrepha.

Draft ISPMs for First Consultation (07/01 – 09/01, 2021):

NAPPO member countries are encouraged to review and provide comments.

Revision of ISPM 4 - (Requirements for the establishment of Pest Free Areas) - This draft revision describes the requirements for establishing and maintaining pest free areas (PFAs) as a phytosanitary measure. PFAs can be used for export certification of plants, plant products and other regulated articles or to support the scientific justification for phytosanitary import requirements.

Use of specific import authorization - (Annex to ISPM 20: Guidelines for a phytosanitary import regulatory system) - This draft Annex provides requirements on harmonized use of specific import authorizations (SIA). SIAs are applied on a case-by-case basis and tailored to each specific import situation. They may be used when official consent for import is necessary, when import requirements have not been established, or when an import would otherwise be prohibited.

Revision of ISPM 18 - (Requirements for the use of irradiation as a phytosanitary measure) - This draft revision provides technical guidance on the application of ionizing radiation as a phytosanitary measure for regulated pests or articles. It also provides consistency with the ISPMs for using...
temperature treatments, fumigation, and modified atmospheres as phytosanitary measures.

**Draft ISPMs for Second Consultation (07/01 – 09/01, 2021):**

NAPPO member countries are encouraged to review and provide comments.

**Audit in the phytosanitary context** – This draft describes the purpose and procedures for audit activities, including the circumstances that may trigger an audit and the criteria and procedures for planning, preparing for and performing audits.

**Commodity-based standards for phytosanitary measures** - This is an overarching concept draft standard that provides guidance on the purpose, use and general requirements for commodity-based standards. Commodity standards will be annexes to the concept standard and cover specific commodities being moved in international trade. Each standard will identify pests associated with the commodity and options for phytosanitary measures to be considered by contracting parties. Inclusion of pest for risk management and treatments will vary by commodity and will need to be technically justified. The purpose of commodity standards is to support harmonized phytosanitary import requirements that facilitate safe trade.

**Focused revision of ISPM 12 in relation to re-export** – This draft revision clarifies considerations and requirements for preparing and issuing phytosanitary certificates in re-export situations.

*Marina A. Zlotina. USDA-APHIS-PPQ, IPPC Technical Director.*

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**News from the IPPC Implementation and Capacity Development Committee**

Over the past decades, the development and adoption of international plant health standards (ISPMs) has allowed for a more predictable, stable, and safe international commerce in plants, plant products and other regulated articles. While this is true, standards would be of little use if they were not well understood, interpreted, or if certain trading partners were lacking the capacity to implement them.

This is where the IPPC Implementation and Capacity Development Committee (IC) comes into play. This relatively young committee (formed in 2017) works to evaluate the level of implementation of the Convention and of its ISPMs, identifies any shortfalls and their root causes, and identifies or develops implementation and capacity development materials to correct these shortfalls.

The IC is the overseeing body for, among others, the Sea Containers Task Force, the Global Plant Health Surveillance Programme, e-Commerce, National Reporting Obligations, the Implementation Review and Support System, and the Phytosanitary Capacity Evaluation tool.

After a first three-year term as Vice-Chair of
the IC (representing North America), I am pleased to confirm that I was recently elected Chair of the IC and I am excited about the work we have in these next three years. After spending the first term sorting-out and prioritizing legacy and new initiatives, the IC is now a more mature body and is poised to deliver implementation materials efficiently.

Throughout the COVID-19 pandemic, the IC met virtually approximatively once per month in 2020-21 (17 virtual meetings held to date) to ensure that they could continue delivering their mandate. For example, guides and implementation materials have been published for: Pest Free Areas and Pest Risk Communication and a Fruit Fly video was also completed. A Guide on Pest Status, a revision of the Guide on Pest Surveillance, a Guide to support the implementation of ISPM 15, and a Guide on e-Commerce are currently under development.

Another recent initiative worth mentioning, is the creation of the phytosanitary components page, where all resources available to assist with the implementation of different phytosanitary systems can be found in one place: guides, manuals, contributed resources, as well as the appropriate ISPMs. For example, one can find all available resources for the implementation of a Pest Free Area, how to conduct Pest Surveillance, how to Report a Pest, etc. The phytosanitary components page can be found here.

Finally, I would like to highlight the fact that NAPPO is active within the IC, through the participation of Stephanie Bloem as the IC representative of all Regional Plant Protection Organizations. NAPPO’s work has been showcased on numerous occasions or used as the basis for the development of implementation resources.

I am happy to answer any requests or questions from the NAPPO family! Simply drop me a line and we can find time to discuss.

Dom Pelletier, CFIA and Chair of the IC

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**Heads-up NAPPO Industry Partners!**

To acknowledge and thank our **industry partners** for the many important contributions you make to our Regional Plant Protection Organization, the NAPPO Secretariat is taking advantage of the opportunity provided through our virtual platform to offer your organization a virtual booth as part of the Exhibit Hall during the 2021 NAPPO Annual Meeting. Please note that we **only have eight booths available**. They are free of charge and will be assigned on a first come first served basis!

Below is general information on what a virtual booth can include. Refer to the image below to locate these informational areas:

1. Area to state your organization’s mission statement or general information.
2. Area to place your organization’s logo.
3. Area where a video or a poster about your organization can be uploaded.
4. Area where you can upload documents to share with meeting participants.
5. Area where a visitor to your booth can leave a question or inquiry.

6. This area also allows the possibility for a group chat or even a video call with someone in your organization!

7. Area where someone from your organization can answer questions; this area also allows your organization to check the visitors to your booth.

If your organization is interested in securing an Exhibit Hall virtual booth, please notify the NAPPO Secretariat as soon as possible. Specific instructions on how to submit materials will follow.
On March 2021, the RSPM 9 (Authorization of laboratories for phytosanitary testing), RSPM 5 (NAPPO Glossary of phytosanitary terms), and Lymantriid (Risks associated with the introduction of exotic tussock moths of potential concern to the NAPPO region) EGs were disbanded after the projects were approved by the NAPPO Executive Committee. Copies of the documents can be downloaded from the NAPPO website (www.nappo.org). The NAPPO Secretariat acknowledges the outstanding work of these EGs and thanks them for their efforts.

**ISPM 25 guidance (Consignments in-transit).** Brendon Reardon (APHIS-PPQ), EG Chairperson has led discussions to establish the approaches and logistics for drafting the ISPM 25 guidance document. Numerous in-transit scenarios have been discussed and those that are high priority for the region have been selected for inclusion in the document. The EG formed a writing subgroup tasked with drafting the document which will include stakeholder’s roles and responsibilities and seamless communication during the in-transit process. This subgroup nominated/elected Wendy Asbil (CFIA) as the Chairperson. Each subgroup member will work on specific sections of the document which will be shared with EG for feedback. Members of the subgroup include Erin Stiers (APHIS-PPQ), Michael Tamilia (US/Canada Industry), Francisca de la Cruz Martínez (SENASICA) and Neftali Reyes Carranza (SENASICA).

**Seeds - Tomato Brown Rugose Fruit Virus (ToBRFV).** The EG formed a third subgroup to work on logistics and procedural details for the ToBRFV ring test. The subgroup nominated/elected Beatriz Xoconostle (CINVESTAV, Mexico) and Samantha Thomas (US Industry) as leads. They had their couple of videoconferences on June 10 and June 24. Subgroup members include Vessela Mavrodieva (APHIS-PPQ), Geoffrey Dennis (APHIS-PPQ), Kevin Ong (Texas A&M), and Ángel Ramírez Suárez (SENASICA). The subgroup will provide crucial information for the Terms of Reference document and chart the path for testing of selected protocols for the detection of the ToBRFV in tomato seed. Read the article on the ToBRFV project in this Newsletter for more information.

**Electronic Certification.** Members continue to provide updates on ePhyto in their countries and at the international level. Electronic certification has gained momentum in the last year due to the pandemic. Ephyto exchanges between NAPPO countries and with countries outside the NAPPO region have increased.

**Phytosanitary Alert System (PAS).** Thirteen official pest reports have been posted between March 1 and June 28, 2021. The PAS manual was completed and shared with EG members.

**Risk-based sampling.** Part 2 of the RBS manual will be completed in the second half of 2021.
New Expert Group on “Quality Management Terminology”

We welcome the new Expert Group working on harmonization of Quality Management terminology across various sectors of plant health. The EG had their first videoconference on June 10 and elected Christina Devorshak (APHIS-PPQ) as Chairperson and Alejandro Cotoc Roldán (SENASICA) as Vice-chair. An overview of project objectives was provided and a compiled list of QM terms from several sources including IPPC and NAPPO Glossaries and other international documents was provided for review and input. Discussions on the terms will be ongoing in 2021. Other EG members include Rajesh Ramarathnam (CFIA), Donald Seaver (APHIS-PPQ), Pedro Robles (SENASICA), Ángel Ramírez Suárez (SENASICA) and Brad Gething (US Industry). Talitha Molet (APHIS-PPQ) is an ad-hoc EG member. The NAPPO Secretariat welcomes all members of the QM Terminology EG.

NAPPO Takes over the Coordination of the GICSV

The Inter-American Coordinating Group in Plant Protection (known by its Spanish acronym as GICSV) is a group that brings together the countries of the Americas and the Caribbean to promote joint actions aimed at preventing the introduction and spread of pests of plants, plant products, and other regulated articles, as well as promoting appropriate measures for their control. The GICSV formally began its operations on March 23, 1998.

Since 2019, five Regional Plant Protection Organizations (RPPOs) in the Americas and Caribbean are represented in the GICSV: Caribbean Agricultural Health and Food Safety Agency (CAHFS), Southern Cone Plant Health Committee (COSAVE), Andean Community (CAN), International Regional Organization for Plant and Animal Health (OIRSA) and the North American Plant Protection Organization (NAPPO). CAHFS joined the GICSV in 2019.

The GICSV organizational structure includes a Coordination Committee, several Working Groups, and the Technical Secretariat.

The Coordination Committee is composed of one representative from each RPPO, and the coordination role rotates to a different RPPO every two years. COSAVE was responsible for the coordination between 2018-2020, and now NAPPO has the coordination for the next two years. In March 2021, COSAVE formally transferred the coordination duties to NAPPO, represented by its Executive Director, Stephanie Bloem, with support of NAPPO’s Scientific Officer, Maribel Hurtado. Because NAPPO and GICSV bring together professionals that speak English and Spanish, NAPPO provides interpretation during all GICSV conference calls.

One of the roles of the Coordination Committee is to propose strategies and work plans and encourage participation of the
member RPPOs in order to achieve the group's objectives. As such, the GICSV work plan for the period March 2021-March 2023, which includes objectives, activities, tasks and a projected timeline for deliverables was proposed by NAPPO and discussed and approved by GICSV.

Currently, the GICSV has six Working Groups:
- Electronic Certification - ePhyto
- HLB - Citrus Greening
- Orthopterans (locusts)
- Fruit Flies
- Tuta absoluta and
- Fusarium oxysporum f. sp cubense Tropical Race 4 (FOC).

These groups are composed of experts designated by each RPPO. Their role is to analyze scientific and technical issues for these pests or phytosanitary initiatives and develop activities and approaches to strengthen plant health in the region.

The Technical Secretariat for the GICSV resides in the Inter-American Institute for Cooperation on Agriculture (IICA).

Maribel Hurtado, NAPPO Scientific Officer.

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**NAPPO Seeds Expert Group Update:**

**Pilot for harmonization of diagnostic protocols for seed pests focused on Tomato brown rugose fruit virus**

**Introduction.** In 2019, the national seed association of Mexico, Asociación Mexicana de Semilleros A. C. (AMSAC), submitted a new project proposal for NAPPO’s consideration on “Recognition of diagnostic tests for seed pests among NAPPO member countries”. The NAPPO Executive Committee (EC) and Advisory and Management Committee (AMC) reviewed the proposal and suggested a more targeted scope and, in late October 2019, the EC endorsed the “Pilot for harmonization of diagnostic protocols for seed pests focused on Tomato brown rugose fruit virus (ToBRFV)”. In March 2020, NAPPO virtually launched a regional seeds expert group (EG), to work on the pilot project. The entire project, including drafting a final report and recommendations is anticipated to span 18-24 months.

**Membership.** This EG has robust and active participation from seed health and diagnostic experts from the all three NAPPO member countries and regional industry representatives. Please see the table for the names and affiliations of the EG members.

**Rationale/Objective.** In endorsing the Pilot for harmonization of diagnostic protocols for seed pests focused on Tomato brown rugose fruit virus (ToBRFV), the EC used the rationale that ToBRFV is a quarantine pest for all NAPPO member countries; ToBRFV is a pest of tomato and pepper plants for planting, fruit and seed; these commodities are heavily traded among the NAPPO member countries; the seed industry is very concerned about this pest; and, harmonization of diagnostic protocols for ToBRFV would have immediate benefits for trade among NAPPO member countries by alleviating the delays and costs of conflicting seed testing results and unnecessary retesting of seed shipments. The immediate objective of this project is to systematically evaluate selected molecular diagnostic (PCR) assays currently employed by NAPPO member countries and/or major trading partners. A longer-term goal of the
study is to develop a NAPPO standard procedure to evaluate seed diagnostic protocols that could be applied to future diagnostics developed for other seed pathogens.

**Approach.** The first task of the EG is to develop Terms of Reference (ToR), or a plan of work, for the pilot. The ToR outlines the project tasks and experimental design developed by the EG. The draft ToR are submitted to the NAPPO EC and AMC for review and approval. Once the ToR are approved, the EG initiates the pilot. Upon completion of laboratory testing phase of the pilot, the EG evaluates and documents the pilot results, including lessons learned, recommendations and, depending on results, develops a project proposal for consideration by NAPPO that has broader and more strategic objectives concerning the harmonization of diagnostic protocols for seed pests based on validated protocols and scientific information.

**Workplan.** In developing the ToR, the Seeds EG has outlined a plan of work (**Figure 1**) that is grouped into three core functions: protocol selection, experimental design and logistics. Three subgroups were created to determine and complete the required tasks outlined below.

**Status.** Currently, the Seeds EG is completing the development of the pilot’s ToR for NAPPO governance committee approval. Significant progress has been made by the EG in establishing a framework for harmonization of ToBRFV diagnostic protocols in the NAPPO region. The first subgroup focused on identifying and selecting candidate PCR protocols. Five protocols were selected for evaluation in the pilot. Three conventional PCR protocols used by the APHIS Plant Pathogen Confirmatory Diagnostics Laboratory, SENASICA and CFIA were selected. Additionally, two qRT-PCR protocols were selected, one adapted by the APHIS Plant Pathogen Confirmatory Diagnostics Laboratory and one developed by the International Seed Federation’s (ISF) International Seed Health Initiative for Vegetable Crops (ISHI-Veg). The protocol selection subgroup also developed an estimate of the costs (excluding labor) for completing the ring test to evaluate the five protocols.

The experimental design subgroup developed a framework for the ring test to compare the selected protocols. The subgroup determined the type and number of samples for the ring test; the minimum number of participating laboratories and analysts required to obtain statistically valid results; and developed a list of criteria (sensitivity, specificity, robustness, etc.) for evaluating the results of each assay.

The third subgroup, the logistics subgroup, was formed in early June 2021 and met for the first time June 4, 2021. The discussion at that initial meeting centered on their tasks.

The subgroup settled on a list of ten tasks:
- Prepare a list of participating laboratories including points of contact and shipping addresses
- Obtain healthy and diseased seed sufficient to prepare necessary panels
- Organize the preparation of ring test panels
- Arrange any necessary permits
- Distribute test panels
- Obtain and aliquot required reagents
- Distribute reagents
- Develop and distribute any necessary work instructions
- Develop a system for data collection, storage and analysis.
- Develop and distribute forms for recording data.
**Next Steps.** The logistics subgroup will develop the procedures to complete its tasks. These procedures along with the workflows of the other two subgroups will be detailed in the ToR document drafted for the NAPPO EC. Once approved by the EC, the Seed EG will execute the workplan outlined in the ToR. At the conclusion of the ring test, the collected data will be evaluated and incorporated into a final report with the consensus recommendation regarding the evaluated ToBRFV protocols and a summary of lessons learned that can be applied to future evaluations of diagnostic protocols.

**Benefits/ Impact.** Given the high volume of trade in seeds within the NAPPO region as well as regulators and industry concerns about this pest, it is expected that the harmonization of diagnostic protocols for the ToBRFV in seeds, once accomplished, will have direct safeguarding and trade benefits among NAPPO countries. As an example, the pilot will help to address discrepancies in diagnostic test results for the virus, which can delay trade of seeds. In the longer term, the pilot project and its resulting recommendations can serve as a model for future regional harmonization on seed diagnostics.

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<td>Claudio Feulner (Industry Contact)</td>
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<td>Marlene Ortiz, <strong>Vice-Chair</strong> (Industry Contact)</td>
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<td>Ric Dunkle (Industry Contact)</td>
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<td>Samantha Thomas (Industry Contact)</td>
<td>Bayer Crop Science</td>
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<td>Geoffrey Dennis</td>
<td>USDA-APHIS</td>
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NAPPO Seed-ToBRFV expert group membership
Figure 1. Seed EG ToBRFV pilot project plan of work

**Protocol Selection Subgroup (Vessela Mavrodieva):**
- Determine criteria for selecting candidate protocols to compare
- Review literature for candidate protocols
- Select protocols to compare
- Estimate budget

**Experimental Design Subgroup (Geoff Dennis):**
- Describe method (e.g., ring test, proficiency panel) to compare protocols
- Determine specifics (sensitivity, specificity, etc. used to compare protocols)
- Describe criteria used to determine acceptability of protocol(s)
- Establish procedures to evaluate results

**Logistics Subgroup (Beatriz Cazares):**
- Prepare a list of participating laboratories
- Obtain healthy and diseased seed
- Prepare and distribute ring test seed panels
- Obtain any necessary permits
- Obtain, aliquot and distribute required reagents
- Develop and distribute work instructions and forms for recording data
- Develop a system for data collection, storage and analysis

**Draft Terms of Reference for EC review**

**EC reviews / revises / approves ToR**

**Conduct pilot and draft final report / recommendation**
Thank you to the NAPPO EG for the International Year of Plant Health (IYPH)

As the International Year of Plant Health (IYPH) comes to an end on July 1st, 2021, the NAPPO Secretariat would like to express its gratitude to the IYPH EG members for their contributions to raise awareness on plant health in the NAPPO region and internationally. Since June 2019, the IYPH EG has worked on many initiatives to promote the IYPH in their NPPOs and in the NAPPO region. Their work includes publishing eight success stories on NAPPO’s contributions to plant health including:

- NAPPO 101: How three nations protect plant health across a continent.
- Commemoration of the 120th anniversary of plant health in Mexico.
- Electronic phytosanitary certification.
- Globe-trotting tree pests.
- How NAPPO is contributing to healthy seed trade.
- NAPPO IYPH 2020 country accomplishments.
- Importance of pest-free areas.
- How NAPPO countries help reduce the risk of pests from sea containers and their cargoes.

Social media was used to disseminate the articles including Twitter and Facebook.

Please visit the NAPPO IYPH webpage (https://planthealth.nappo.org/) to access the social media accounts for each NPPO.

With the theme “Plant Health has no borders” the EG coordinated the illumination of historic monuments and landmarks in Canada, United States and Mexico during April 2021 (Invasive species awareness month in the United States). Buildings and monuments illuminated in green include:

- Niagara Falls (on both the U.S. and Canadian sides)
- The Canadian Museum of Nature
- The USDA’s Jamie L. Whitten building on the National Mall in Washington, D.C.
- Government buildings in Mexico City
- Mexico’s Independence Monument
- The Monument to Cuauhtémoc, last Aztec Emperor
- Mexico’s Monument to the Revolution
- The Monument to Mexico’s Oil Industry

The symbolic illumination of landmarks and monuments represented solidarity among all NAPPO countries in the preservation of plant resources and raised awareness on the importance of plant health.
Thank you to Ifi Chafy (CFIA), Lisa Lafontaine (CFIA), Gregory Rosenthal (USDA-APHIS-PPQ), Heather Curlett (USDA-APHIS-PPQ), Beatriz Josefina Martínez Reding García (SENASICA), Victor Hugo Rodríguez Díaz (SENASICA) and Karen Stephany Miranda Ponce (SENASICA) for a job well done.

Illumination of Niagara falls along the U.S./Canadian border. “Plant Health has no borders”. USDA photo by Margaret Pelczynski.

USDA Headquarters (Jamie L. Whitten building) on the National Mall in Washington DC. Photo by K. Cecilia Sequeira.

Atrium of the Canadian museum of Nature in Ottawa, Ontario, Canada. Photo courtesy of Greg Kolz.

Mexico’s Monument of Independence in Mexico City. Photo courtesy of SENASICA.
“Plant health knows no borders. Invasive insects and plant diseases easily cross international borders. That is why it’s important to work together with our neighbors to protect our precious resources. As a leader in plant protection, Canada enthusiastically supports the International Year of Plant Health. We are excited to see that our collaboration with the United States and Mexico is helping raise awareness of plant health. I encourage all Canadians to be vigilant about plant protection and help spread the word through social media.”

-The Honourable Marie-Claude Bibeau, Minister of Agriculture and Agri-Food, Canada

“These illuminations in Canada, Mexico, and the United States demonstrate a powerful solidarity in plant protection that stretches across North America. This event will raise public awareness about the need to protect our vulnerable plant resources against damaging invasive pests. These pests can devastate crops, throw ecosystems out of balance, and jeopardize the livelihoods of farmers and ranchers. We encourage people to visit HungryPests.com to learn how they can make a difference by preventing the unintentional spread of invasive pests.”

-Dr. Osama El-Lissy, Deputy Administrator of the U.S. Department of Agriculture’s Plant Protection and Quarantine

“It is important for Mexico’s society to be aware that plant health drives sustainable agriculture, fosters economic and commercial development, creates responsible practices which help reduce pest spread and encourage scientific innovation. These are essential for the development of Mexico’s fields as they contribute to human wellbeing and to build wealth and social peace.”

Mr. Francisco Ramírez y Ramírez, Mexico’s Plant Health General Director

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**Brian Zak is Retiring**

Brian served as a forest industry specialist engaged in all aspects of forestry, logging, market access, industry trade associations, international consulting, product promotion in offshore markets, as well as addressing phytosanitary and market access issues for the industry. All this in a 51-year time span.

Brian is a native of the Alberta Rockies who then went on to graduate from the University of Montana in 1970 and worked in the many industry sectors throughout Alberta and British Columbia. Brian, his wife Lynn and 2 daughters lived in 14 different communities. He notes “Our Christmas Card List was long, and our holidays were intended to return to the different communities for our daughters to revisit their friends.”

In his role as a Phytosanitary Specialist for Canada Wood, Brian has been engaged with NAPPO panels and Expert Groups since 2007 and NAPPO has greatly benefited from his expertise and contributions.

The NAPPO Secretariat acknowledges and thanks Mr. Brian Zak for valuable and insightful contributions to the different NAPPO projects he participated and wishes Brian an enjoyable and fulfilling retirement.
“I have many fond memories of both the phytosanitary challenges and the friends that I have gained since then. I have retired 5 times throughout my career but kept coming back because I missed the people, the camaraderie, and the challenges!

It is time to let others take over. I have too many hobbies to look forward to and lucky to have a great wife who continues to support me in all that we want to do.

AND yes, I will really miss the people of all 3 NAPPO countries as well as those from the IPPC and IFQRG”.

Brian Zak