



Australian Government
Department of Agriculture,
Water and the Environment



INTERNATIONAL YEAR OF
PLANT HEALTH
2020

International symposium on limiting the global spread of contaminating pests

3–4 March 2020, Pullman Hyde Park, Sydney, Australia





I am proud to welcome all delegates to Sydney, Australia for the International Symposium on Limiting the Spread of Contaminating Pests during this year, the International Year of Plant Health.

The arrival and spread of contaminating pests can have wide-ranging short and long-term consequences for industry, land use and community needs. Such pests are a global issue recognised by the Commission on Phytosanitary Measures who are working to finalise the recommendation on facilitating safe trade by reducing the incidence of contaminating pests associated with traded goods.

This symposium will not only socialise the recommendation, it enables the sharing of experiences of contaminating pests in different countries and industries and aims to foster collaboration across nations on ways to improve container hygiene and pathway management. There is so much opportunity in collaborating on solutions and I am pleased that Australia is hosting such an important event.

Such measures will help to protect the natural environment and livelihoods across the world. In Australia our biosecurity landscape is changing quickly and growing in complexity. Like many of you we are facing increasing volumes of international trade and travel, an increasing complexity of global supply chains and changes in the environment, including climate change.



This symposium enables the sharing of experiences of contaminating pests in different countries and industries, aims to foster collaboration across nations on ways to improve container hygiene and pathway management and encourages us all to look to our future and create a path towards better biosecurity across the globe.

In addition to trade volumes increasing, pests and diseases are spreading at an increasing rate. For example the brown marmorated stink bug (BMSB), a key contaminating pest, continues its march across the northern, and now southern hemispheres. Since originating in Asia, in the last five years Europe has been severely affected, interceptions in Australia have increased as the season extends from September to April of each year and the 2019–20 season saw the number of BMSB risk countries increased to 33.



This symposium encourages us all to look to our future and create a path towards better biosecurity across the globe.

Lyn O'Connell, Head of Biosecurity



International Year of Plant Health

In December 2018, the United Nations (UN) General Assembly declared 2020 as the International Year of Plant Health (IYPH). The year is a once-in-a-lifetime opportunity to raise global awareness on how protecting plant health can help end hunger, reduce poverty, protect the environment, and boost economic development.

In April 2016, the Commission on Phytosanitary Measures (CPM) of the International Plant Protection Convention (IPPC) adopted the first formal initiative to declare 2020 as the International Year of Plant Health.

After the approval of the IYPH resolution by the Fortieth Session of the FAO Conference in July 2017, the Director-General of the Food and Agriculture Organization of the United Nations (FAO) informed the UN Secretary-General that the FAO Conference had adopted the following resolution “2020 to be declared the International Year on Plant Health” and requested that the resolution be presented at the following session of the United Nations General Assembly (UNGA).

In December 2018, the UNGA declared 2020 the International Year of Plant Health with a unanimous vote and mandated FAO, in collaboration with the IPPC, to facilitate its implementation. In June 2019, FAO and the IPPC established an IYPH International Steering Committee, composed of representatives from the seven FAO Regions and divisions, the private sector and civil society.

International Symposium on Limiting the Spread of Contaminating Pests

The Australian Department of Agriculture, Water and the Environment welcomes invited government and industry representatives involved in international trade and NPPOs to the International Symposium on Limiting the Spread of Contaminant Pests at the Pullman Sydney Hyde Park in Sydney, Australia from 3 - 4 March 2020.

This Symposium brings together government representatives from International Plant Protection Convention (IPPC) member countries and relevant industry organisations involved in international trade to discuss the issue of contaminant (hitchhiker) pests and foster collaboration between industry and government stakeholders on cost effective commercial solutions. Contaminating pests, otherwise known as 'hitchhikers' are pests associated with storage places, packaging, conveyances, containers, soil and any other organism, object or material capable of harbouring or spreading plant pests. These pests are in addition to those already identified as associated with particular plants and plant products

The Symposium will help to inform representatives about the IPPC Commission on Phytosanitary Measures (CPM) recommendation on **Facilitating safe trade by reducing the incidence of contaminating pests associated with traded goods** that was agreed by CPM-14 to progress to CPM-15 (2020) as a draft for country consultation. The IPPC Strategic Planning Group (SPG) reviewed the recommendation at its October 2019 meeting.

Key objectives of the symposium:

Raise awareness about the global spread of contaminant pests on goods and conveyances, including their effect on production and amenity.

- Highlight strategies employed by industry and international governments to limit the spread of contaminant pests, including lessons learnt.
- Facilitate discussion between industry and government representatives about improved container hygiene and pathway management.
- Encourage global stewardship for clean trade and collaboration among stakeholders involved at national, regional and global levels.
- Explore non-regulatory commercial solutions to help prevent the spread and establishment of contaminant pests.

Welcome to Country and Traditional Aboriginal Smoking Ceremony

A Welcome to Country is performed by an Aboriginal custodian of the land. It is a sign of respect to acknowledge the traditional owners of the land.

Aboriginal and Torres Strait Islander Smoking ceremonies are over 60,000 years old. During the ceremony a mixture of Australian native plants are used.

Further information is available on the Metropolitan Local Aboriginal Land Council website metrolalc.org.au/services-resources/smoking-ceremony/

Program

Tuesday 3 March 2020

	08:30	Registration opens
1	09:00	Welcome to Country and Traditional Aboriginal Smoking Ceremony Uncle Allen Madden and Brendan Kerin, Metropolitan Local Aboriginal Land Council
2	09:15	Table introductions, housekeeping and defining contaminating pests Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
3	09:30	Opening address Ian Thompson, Department of Agriculture, Water and the Environment
4	09:45	CPM recommendations and their contribution to International Year of Plant Health (IYPH) 2020 objectives Artur Shamilov, International Plant Protection Convention Secretariat
5	09:55	Contaminating Pests - global problem, local solutions Lois Ransom PSM, Department of Agriculture, Water and the Environment
6	10:15	Convention on Biological Diversity – Contaminating pests Ntakadzeni Tshidada, Department of Environment, Forestry and Fisheries South Africa
7	10:30	Taronga’s Wildlife Crisis Response Tess Jones and Bronwyn Palmer, Taronga Zoo, Zoomobile Officers
	10:45	Morning tea
8	11:15	Risk pathways and container movements along the international supply chain Rama Karri, Department of Agriculture, Water and the Environment
9	11:40	Managing biosecurity risks in a global industry Angela Gillham, Maritime Industry Australia Limited
10	12:05	Managing contaminating pests – the difficulties in regulating inanimate pathways Penny McLeod and Dr Sina Waghorn, New Zealand Ministry for Primary Industries
	12:30	Lunch
11	13:30	Facilitated discussion – Sharing your experiences, providing global context Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
12	14:05	Brown marmorated stink bug – a significant agricultural and amenity pest Dr Nikoloz Meskhi and Lasha Shalamberidze, National Food Agency, Ministry of Environmental Protection and Agriculture of Georgia
13	14:35	Spotted Lanternfly in the United States Dr Greg Krawczyk, Penn State University
14	15:05	Contaminating pests on wood products – NAPPO Science & Technology document Meghan Noseworthy, Natural Resources Canada
	15:30	Afternoon tea
15	15:50	Technical development for the management of contaminating pests (delivered Via Zoom) Dr Xubin Pan, Chinese Academy of Inspection and Quarantine
16	16:10	Facilitated discussion – Risk pathways and patterns, examining the deficiencies/gaps Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
17	16:40	Recap and meeting close Ian Thompson, Department of Agriculture, Water and the Environment
	17:00	Networking drinks Concludes at 18:00

Wednesday 4 March 2020

	08:30	Registration opens
1	09:00	Recap and introduction Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
2	09:10	Warm-up activity Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
3	09:20	Emerging pathways and risks of contaminating pests Dr Brian Garms, Department of Agriculture, Water and the Environment
4	09:45	Asian gypsy moth and phytosanitary risk matrices Melisa Nedilskyj, National Service for Agri-food Health and Quality (Senasa) Argentina
5	10:10	The costs and benefits of contaminating pest risk management strategies in Australia – a wine supply chain perspective Anna Hooper, Australian Grape and Wine Inc.
	10:35	Morning tea
6	10:55	Facilitated discussion – Incentives for clean trade Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
7	11:10	Sea container taskforce presentation Rama Karri, Department of Agriculture, Water and the Environment
8	11:35	Detector dogs – Screening for pests in addition to products Jeff Smith, Department of Agriculture, Water and the Environment
9	12:05	Sea Container Hygiene System Dr Sina Waghorn, New Zealand Ministry for Primary Industries, Rama Karri, Department of Agriculture, Water and the Environment
	12:30	Lunch
10	13:30	Facilitated discussion – Barriers or challenges to ensuring clean trade Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
11	13:50	Global best practice to manage and prevent the establishment of contaminating pests Professor Simon McKirdy, Harry Butler Institute, Murdoch University
12	14:15	Building capacity against invasive ants in the pacific Dr Allan Burne, New Zealand Ministry of Primary Industries
13	14:40	Emerging technology and future solutions Dr Andy Sheppard, Commonwealth Scientific and Industrial Research Organisation (CSIRO)
14	15:05	Business Research and Innovation Initiative – Managing the biosecurity risk of hitchhiking pests and contaminants on and in shipping containers Dr Gertraud Norton, Department of Agriculture, Water and the Environment
	15:30	Afternoon tea
15	15:50	Facilitated discussion – What do we want the future to look like. Solutions and actions, encouraging compliance Facilitator Jamie Nicholls, Department of Agriculture, Water and the Environment
16	16:10	Virtual working group panel discussion Virtual working group members
17	16:40	Closing remarks and thanks Ian Thompson, Department of Agriculture, Water and the Environment
	17:00	Close

Please note, this program was correct at time of printing and may be subject to change.



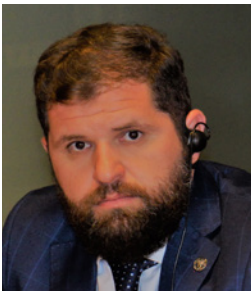
Ian Thompson, Australia's Chief Environmental Biosecurity Officer, Department for Agriculture, Water and the Environment

Ian Thompson is Australia's Chief Environmental Biosecurity Officer. Appointed in 2018 he is the primary representative of, and advisor to, the Australian Government environmental biosecurity risks.

A strong advocate for the protection of our unique flora and fauna, Ian has previously led biosecurity policy and emergency response, plant industry policy, field crop issues, plant health, native title, drought management, water infrastructure and water reform, rural adjustment, rural leadership and rural research issues. Prior to his appointment Ian's responsibility spanned sustainable agriculture policies and programs, fisheries, forestry, agricultural and veterinary chemicals, community and Indigenous engagement and Landcare.

Ian has a Bachelor of Natural Resources degree from the University of New England.

DAY 1 Tuesday 3 March – Presenters and Abstracts



Artur Shamilov, International Plant Protection Convention Secretariat, Commission on Phytosanitary Measures

FAO Agricultural Officer (IPPC Secretariat). Since 2012 at IPPC Secretariat lead for the Technical Panel on Phytosanitary Treatments. Later from 2014 he worked in FAO Regional Office for Asia and the Pacific and was responsible for overseeing the work of several committees under the Asia and Pacific Plant Protection Commission (APPPC) such as Pesticide Management Committee, IPM Committee, Plant and Quarantine Committee.

From 2016 Artur was based at the FAO Regional Office for Europe and Central Asia. Intervention projects comprised various aspects of agronomy, including promotion of IPM, Good Agricultural Practices (GAP), pesticide risk reduction programs as part of his assignment as Deputy Delivery Manager of the Regional Initiative on Sustainable Natural Resource Management.

Since 2019 he has been the IPPC Secretariat (FAO AGDI), member of the standard setting unit responsible for drafting of International Standards on Phytosanitary Measure (ISPMs).

CPM recommendations and their contribution to International Year of Plant Health (IYPH) 2020 objectives

The Commission on Phytosanitary Measures (CPM) have been adopting CPM Recommendations for many years. A contracting party (CP) or the IPPC Secretariat, following the CPM Recommendations process and the agreed criteria may propose a topic for a CPM Recommendation and present it to the CPM.

An initial draft of the proposed CPM Recommendation and the rationale or justification for its need should be presented to the CPM for consideration through the IPPC Secretariat. The need for a new CPM Recommendation should be discussed and agreed by the CPM. In all cases, the proposed topic should address issues that fit within the legal framework of the Convention, its International Standards for Phytosanitary Measures (ISPMs), or strategic goals. CPM Recommendations address important issues related to plant health, either to promote action on a specific phytosanitary issue or to address a more generalized issue. Hence, together with

ISPMs, diagnostic protocols and phytosanitary treatments, the CPM recommendations are contributing to the overall Mission of IPPC and help countries to reach the goals of IYPH 2020.

Lois Ransom PSM, Department of Agriculture, Water and the Environment

Lois Ransom is a Senior Executive in the Australian Government Department of Agriculture, Water and the Environment. She is a plant pathologist by training and practice who has worked for over thirty years in a wide range of roles across the spectrum of plant health and protection in Australia and overseas. These roles have included field and quarantine pathology in Tasmania, Agriculture Counsellor at the Australian Embassy in Tokyo, Australia's Chief Plant Protection Officer and other national plant biosecurity policy and operations roles. She is the immediate past Chair of the Commission on Phytosanitary Measures of the International Plant Protection Convention and has been involved in the Pacific Plant Protection Organisation for many years.



Contaminant pests - global problem, local solutions

Recent Australian experience indicates an increase in the number and type of pests and other risks associated with containers, conveyances and pathways, and with goods that are not regulated plants or plant products.

The same pests are moving between all countries by the same means, and the global spread of pests, including contaminating pests, will continue. This poses a significant risk to production and natural ecosystems. The rapid inter and trans-continental spread of the BMSB and the red imported fire ant (RIFA) highlight this risk and the significant impacts that can result from the establishment of serious pests in an area.

Global trade continues to grow along with commercial demands that governments facilitate the movement of goods. Governments are focussed on facilitating safe trade. Ideally, regulation should be a last resort, but where it is required in the case of failure of commercial solutions, international harmonisation of regulation should be the global goal.

Ntakadzeni Tshidada, Department of Environment, Forestry and Fisheries South Africa

Ms Ntakadzeni Tshidada, M.Sc: Botany, is the Deputy Director at the Department of Environment, Forestry, and Fisheries in South Africa. One of her responsibilities is to conduct environmental risk assessment for invasive alien species, support policy development and lead the process of developing the draft National Invasive Species Strategy (NISSAP). Ms Tshidada is currently the co-chair of the Convention on Biological Diversity, Ad hoc Technical Expert Group on Invasive Alien Species and has in the past served on the Expert Working Group under the IPPC that developed ANNEX 4: Pest risk analysis for plants as quarantine pests.



Convention on biological diversity - contaminating pests

The 14th session of the Conference of the Parties to the Convention on Biological Diversity adopted a comprehensive and participatory process for the preparation of the post-2020 global biodiversity framework as outlined in Decision 14/34. The key information sources identified in the preparatory process are national

reports, assessments prepared by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and other bodies and relevant peer reviewed literature, as well as the fifth edition of the Global Biodiversity Outlook (GBO). Both reports identified Invasive Alien Species as direct drivers to biodiversity loss and therefore urgent interventions to address their impacts is required. According to the analysis on the IPBES report, the global progress made towards achieving Aichi Target 9 was on identifying and prioritising invasive alien. The report also acknowledged successful programmes to eradicate such species, especially on islands has notably improved however despite such progress, we are unlikely to achieve the target by the end of 2020. Therefore, it is worth noting that despite the efforts to fight against invasive alien species there is no evidence of a slowing down in the number of new introductions. Onward looking, we need to consider a new approach, upscaling efforts and also consider the role of other conventions, actors and relevant organisation to support the efforts of control, manage and eradicate where possible while working towards achieving the 2050 vision of leaving in harmony with nature.

Tess Jones and Bronwyn Palmer, Taronga Zoo Zoomobile Officers

Taronga's Wildlife Crisis Response

Taronga Conservation Society Australia is committed to ensuring the survival of species affected by the recent bushfire crisis and the ongoing drought. Taronga is enacting a phased response to save and restore vital species and habitats that have been heavily impacted and destroyed. The first phase includes emergency response actions including wildlife rescue, wildlife first aid and specialist veterinary and wildlife care support. The second involves immediate recovery actions for affected and priority species and the next phase is the long-term species recovery plans. Conservation-based zoos like Taronga Zoo in Sydney and Taronga Western Plains Zoo in Dubbo are best placed to respond to the wildlife crisis as they have the veterinary and husbandry expertise in house and in the field, the critical care facilities such as the Taronga Wildlife Hospital and the ability to contribute to rebuilding damaged populations of priority species through recovery and breed to release programs.



Rama Karri, Department of Agriculture, Water and the Environment

Rama Karri is a Director in the Australian Department of Agriculture, Water and Environment with over 10 years of experience in establishing regulatory settings for managing contaminants and contaminant pests. He has significant experience in establishing biosecurity quality systems in overseas ports and is the Australian representative on the IPPC's Sea Container Task Force and a member of the QUADS E-commerce working group.

Risk pathways and container movements along the international supply chain

Rama will discuss the complex logistics of the movement of sea containers. The presentation will also highlight the common touch points for contamination which will be useful in identifying appropriate non-regulatory commercial solutions to help prevent the spread and establishment of contaminant pests.

Angela Gillham, Maritime Industry Australia Limited

Angela is Maritime Industry Australia Limited's specialist in shipping policy matters, with a particular focus on operations, health and safety and environmental performance. She has managed a range of shipping related research and development projects and represents the interests of the Australian industry at a range of international forums, including the International Maritime Organisation as an industry advisor to the Australian delegation, and at the International Chamber of Shipping.



Managing biosecurity risks in a global industry

The potential economic and environmental impacts of introduced species are immense and usually irreversible. Global trade is potentially a significant contributor to biosecurity risk and as the facilitator of around 90% of world trade, international shipping both underpins global prosperity and economic growth, but also, if left unmanaged, is a potentially significant vector for the transmission of economically damaging invasive species around the world. Given the limitations of eradication, the best tool we have is prevention. Those benefiting from the prevention of invasive species incursions, also benefit from being able to access cost effective freight. It is necessary to ensure that biosecurity requirements and processes are effective, practical and commensurate with the risk presented and leverage off existing procedures and industry practice.

Penny McLeod, New Zealand Ministry for Primary Industries

Penny has a Bachelor of Science Degree (biological sciences) from the University of Auckland. She has worked for Ministry for Primary Industries (MPI) for 10 years as a frontline quarantine officer, an adviser in aircraft disinsection and is now a senior adviser in the Treatments and Animates Pathways Team where she specialises in the regulation of vehicles, machinery and parts.



Dr Sina Waghorn, New Zealand Ministry for Primary Industries

Sina studied Biological Sciences at the University of Canterbury with a BSc in Plant Biology, MSc in Terrestrial Ecology and PhD in Biosecurity (Sea Containers).

Sina has a regulatory background in both local and central government. She has been with the MPI for six years within the Plant and Pathways Directorate. Sina is the lead Risk Manager in the Aircraft, Sea Container and Passenger Pathways and is a member of the International Plant Protection Convention's Sea Container Task Force.



Managing contaminating pests - the difficulties in regulating inanimate pathways

The New Zealand Ministry for Primary Industries has import requirements for a range of inanimate pathways (commodities and craft), which are used to reduce the risk of contaminating pests hitchhiking their way to establishment in New Zealand.

Regulating inanimate pathways has many challenges due to the wide range of commodities and the many associated hitchhiking pests which may differ between times of the year and countries. Additionally, there is usually little or no involvement with other National Plant Protection Organisations which then relies on relationships to be formed directly with industry stakeholders such as shipping lines, manufacturers, treatment providers and exporters. Therefore implementing

targeted risk management requirements to achieve high levels of compliance, and incorporating monitoring frameworks on-shore and off-shore can be difficult and resource intensive.



Dr Nikoloz Meskhi, National Food Agency, Ministry of Environmental Protection and Agriculture of Georgia

Nikoloz Meskhi serves as the Head of Plant Protection Department at the LEPL National Food Agency (NFA) of the Ministry of Environmental Protection and Agriculture of Georgia. He graduated from the Georgian Agrarian University in 2006 with a Bachelor degree, followed by a Master's Degree in Entomology in 2008. He received his Ph.D. in Agricultural Science from the University of Shota Rustaveli of Batumi.

In February 2007, he started work as a consulting agronomist at a pesticide importing company. Since 2012, he has been working at the Plant Protection Department of NFA. Currently he is in charge of numerous key agency activities, such as countermeasure campaigns against various pests, like locusts, fall webworms and box tree moths. He is also involved in efforts to control BMSB (*Halyomorpha halys*), measures carried out by NFA within the scope of the official program. Nikoloz Meskhi has participated in multiple international training courses, workshops and official meetings across 22 countries.



Lasha Shalamberidze, National Food Agency, Ministry of Environmental Protection and Agriculture of Georgia

Lasha Shalamberidze serves as the Head of the Department of Regional Relations at the Ministry of Environmental Protection and Agriculture of Georgia as well as the Head of the Anti-BMSB Centre. He graduated from the International Black Sea University in 2003 with a Bachelor degree. Since 2004, he has worked in the Ministry of Defence of Georgia for nine years as the Head of several operational departments. He completed the crisis management course in Sweden and took active part in solving crises in the country including number of natural disasters. Lasha managed field activities by heading multitask operations in more than 700 villages in western Georgia, in cooperation with the team from the National Food Agency.

Brown marmorated stink bug – a significant agricultural and amenity pest

BMSB populations were observed in Georgia during the 2015 season with first significant damage to hazelnut crops reported a year later. In addition to hazelnuts, BMSB also had the potential to inflict severe harm to other crops, such as maize, apple and peach.

Since 2017, within the frame of the official program, National food Agency has administered large scale control measures against BMSB in western Georgia. For monitoring, pheromone traps have been used and in 2017 more than 20,000 traps were installed throughout the country. On the basis of monitoring data, chemical treatment has been carried out with the help of special equipment NFA possessed. From chemical insecticides synthetic pyrethroids were used. As a result, at locations where the state performed assigned activities, the harvest was preserved and the pest population decreased.

Dr Greg Krawczyk, Penn State University

Dr Greg Krawczyk is an extension tree fruit entomologist in the Department of Entomology at The Pennsylvania State University. His laboratory is located at the Fruit Research and Extension Centre in Biglerville, PA. His research and extension programs are dedicated to assisting the fruit industry in practical adoption and integration of the newest biological and technological advances in insect pest management and activities supporting the sustainability and profitability of fruit production. The specific activities within his applied research program are focused on aspects of integrated pest management and arthropod monitoring with a special emphasis on insecticide resistance management and conservation of beneficial insects and pollinators important to the fruit ecosystem. He frequently presents the results of his research activities at national and international conferences and received multiple awards for his scientific contributions. Working in close cooperation with other researchers he participated in the development of practical recommendations to manage BMSB and spotted lantern fly (SLF) as well as field testing of alternative tools to manage BMSB such as threshold-based treatments and “attract and kill” tactics.



Spotted lanternfly in the United States

The spotted lanternfly (*Lycorma delicatula* (White), (Hemiptera: Fulgoridae) was first found in Pennsylvania, USA in September 2014. In the five years since the original detection in a very localised area of the eastern Berks County, Pennsylvania, the SLF quarantine zone expanded to over 17,000 square kilometres, encompassing 14 southeast counties in Pennsylvania, limited areas in neighbouring states of New Jersey, Delaware, Maryland as well as Virginia and West Virginia.

This phloem-feeding treehopper insect feeds on a wide range of host plants including over 65 species of plants and as such, has the potential ability to become a serious pest of timber, ornamental trees, pome and stone fruit, grapes, and other small fruits such as blueberries. It was also reported to feed on hops and the juvenile forms were observed feeding on several types of vegetables. The damage caused by SLF produced honeydew (sugary excrement) and sooty mold (fungi growing on honeydew) were observed in vineyards in less than two years after the initial pest detection with some vineyards becoming completely destroyed by the 2019 season.

Meghan Noseworthy, Natural Resources Canada

Meghan Noseworthy works for the Canadian Forest Service of Natural Resources Canada in Victoria, BC as the manager of the forest invasives and phytosanitary research group. Her group works on scientific solutions to phytosanitary issues associated with the trade of wood products. Meghan is the chair of the North American Plant Protection (NAPPO) forestry expert group, developing a science and technology document, Contaminating pests of wood commodities. The objective of this document is to provide scientific background on living contaminating organisms associated with wood commodities and provide guidance regarding actions appropriate for addressing related phytosanitary risks.



Contaminating pests on wood products – NAPPO Science and Technology document

There is increasing global concern about contaminating pests moving in association with international trade. A clear scientific understanding of the biology of contaminating pests is critical in the development of effective, rational phytosanitary policies. NAPPO has established an expert working group to develop a science and technology document to provide basic information on contaminating pests and propose potential mitigation measures. A review of the document will be presented.



Dr Xubin Pan, Chinese Academy of Inspection and Quarantine

Pest Risk Analysis Expert in Chinese Academy of Inspection and Quarantine

Technical development for the management of contaminant pests

In order to manage contaminant pests precisely and efficiently, new technologies should be applied into the national surveillance system. Ports are scattered all over the country and it is difficult for all quarantine officers to identify each pest precisely. The system of remote pest identification has addressed this problem by inputting pest information into a file-sharing cloud for quarantine officers use only, including pictures and descriptions. Quarantine officers from other ports who are more specialised and experienced in the certain pest could help to identify it directly. This system makes pest identification in a more precise and fast way.

3D specimens assist in the system of remote pest identification to some extent, the method could help to observe pests in any angle and to have even better view of details than biological specimen. It is also a novel method for display and advertise.

Traditional field surveys are always demanding and incomplete in the complicated environment. In contrast, unmanned aerial vehicles could conduct remote and general survey automatically or manually. By combining high-resolution drones and identification functions, pests, especially weeds, could be found and identified quickly. Dynamic information of occurrence of pests could be obtained in time.

DAY 2 Wednesday 4 March – Presenters and Abstracts



Dr Brian Garms, Department of Agriculture, Water and the Environment

Brian Garms is director of the Grains, Weeds and Contaminants section of the Biosecurity Plant Division in the Department of Agriculture, Water and the Environment. Brian has spent over seven years at the department working on a range of issues including contaminating pests since completing his PhD in entomology at the Australian National University.

Emerging pathways and risks of contaminating pests

Managing contaminant pests in a range of goods is becoming an increasingly large and complex issue for the Department of Agriculture, Water and the Environment. This presentation will give the background on recent developments with managing the BMSB as a contaminant pest; explain similarities to other pests, raise awareness of changing risk profiles and will outline key features that allow some types of contaminating pests to successfully infest cargo and spread to new areas. This presentation will also show how, in these cases, risk from such pests can be predicted and then potentially managed.

Melisa Nedilskyj, National Service for Agri-food Health and Quality, SENASA - Argentina

Melisa Nedilskyj is an Agricultural Engineer, graduating from the Faculty of Agricultural Sciences of the Lomas de Zamora National University, Buenos Aires, Argentina in 2010. In 2009 she started her training as a Professional Specialist Analyst in Plant Protection with a focus in plant quarantine activities in the NPPO of Argentina.

Since 2011 Melisa has also participated in the Plant Quarantine Technical Group of COSAVE (the Regional Plant Protection Organization (RPPO) of the Southern Cone.

She is working on her thesis on the analysis of COSAVE from the international cooperation theory to complete her Master's Degree in International Relations in FLACSO.

Actions against the Asian gypsy moth in Argentina and identification of risks posed by contaminating pests and its impact on the phytosanitary risk matrix

SENASA - Argentina is taking phytosanitary actions against Asian gypsy moth (*Lymantria dispar*) since 1998 as it was declared a pest of quarantine importance. Many regulated articles were subject to phytosanitary measures for this pest. However, due to the pathways identified for the pest, the steady increase of international trade and the associated risk of pest introduction, the NPPO identified the need to work with other institutions and organisations to strengthen and coordinate measures through regulations.

In the last four years there were international alerts for other contaminant pests of quarantine importance for Argentina. These hazards are also being considered in the phytosanitary risk matrix, developed by SENASA - Argentina that assesses the pest risk of importing regulated articles. The aim of this tool is to focus phytosanitary inspection activities in regulated articles that could have high risk of spreading pests, in order to make a better use of limited resources and at the same time protect Argentina from new pest introduction. The parameters that are evaluated for the products are: origin of the regulated article, category of the commodity according to their pest risk, importing frequency, packaging and records of intercepted pests.

Anna Hooper, Australian Grape and Wine Inc.

Anna Hooper is Manager of Industry Policy at Australian Grape and wine, the peak association representing wine grape and wine producers across Australia. Anna has worked in the grape and wine sector throughout her career, originally in vineyard management and winemaking both in Australia and overseas and later as general manager of a premium wine producer in South Australia. She has been a non-executive director on a number of private and government boards in the fields of biosecurity, natural resource management and grape and wine business. Prior to the formation of Australian Grape and Wine she gained experience in national advocacy as Chief Executive Officer of Australian Vignerons. Having worked across a broad range of roles, including practical hands-on industry experience, she has seen first-hand how pest and diseases and other biosecurity risks impact the sector. Anna has tertiary qualifications in winemaking, business and law and was the recipient of the South Australian Rural Women's Award in 2013.



The costs and benefits of contaminating pest risk management strategies in Australia - a wine supply chain perspective

The wine sector holds concerns that the global biosecurity landscape is becoming increasingly complex and difficult to manage. The spread of contaminant pests is taking its toll across the entire wine supply chain. While the arrival of a new pest has the potential to impose financial costs to wine grape producers, so too does the risk management burden impose cost and inconvenience on suppliers to the sector.

Certain pests can feed on grapes or foliage, diminishing yields and creating problems during the establishment of young vines. As wine grapes are destined for processing, they have a higher tolerance for blemishes compared to fruits destined for direct consumption.

Further upstream of the supply chain seasonal biosecurity measures in Australia are proving costly to suppliers and these costs are often passed on directly to the wine producer. For example, barrel and equipment suppliers must now reduce the number of units in the container to meet loading requirements. The sector would embrace a cost-effective solution to risk management that maintains an acceptable level of risk whilst reducing the regulatory burden on the supply chain.



Rama Karri, Department of Agriculture, Water and the Environment

Sea Container Task Force (SCTF)

Presenters will discuss the role of SCTF in minimising pests associated with the movement of sea containers in international trade. The presenters will outline some of the SCTF activities including future measures to assist in reducing risks associated with sea containers and their cargoes.



Jeff Smith, Department of Agriculture, Water and the Environment

Jeff is an Assistant Director with the Department of Agriculture Water and Environment's Detector Dog Program. With over 20 years' experience as a professional detection dog trainer and instructor he is passionate about the capability, mobility and opportunity offered by detector dogs and is constantly seeking new opportunities to support detection programs through the use of well-trained and supported detector dogs teams.

Detector dogs – Screening for pests in addition to products

Biosecurity detector dogs have been used by the department since 1992. In that time they have been deployed across a variety of locations and scenarios, usually interception of products that could present a risk to our biosecurity status. Examples of this include the detection of meat products with the potential to harbour African swine fever or foot and mouth disease and the interception of plant material with the potential to harbour disease such as citrus canker and Dutch elm disease. In recent years the department's focus for detector dogs has broadened to include the detection of pests in addition to products.



Dr Sina Waghorn, New Zealand Ministry for Primary Industries and Rama Karri, Department of Agriculture, Water and the Environment

Sea Container Hygiene System

The Sea Container Hygiene System (the System) is an NPPO to industry agreement established in 2006. It involves industry establishing sea container cleaning and storage systems that are audited by the NPPO. Australia officially joined with the System in 2010, and twelve systems have been approved across six countries within the Pacific.

Prior to 2006, sea containers arriving in New Zealand from the Pacific had almost a 50% contamination rate (including high levels of invasive ants species), which led to high levels of on-arrival interventions, costs and delays and in some cases denial of discharge. In order to reduce time and cost, industry worked with New Zealand to establish the System that has resulted in a reduction of on-arrival contamination rates of approximately 99.5%. The success of the System has seen a direct and tangible reduction in time and cost for industry and to the New Zealand and Australian NPPOs.

Professor Simon McKirdy, Director Harry Butler Institute and Professor in Biosecurity at Murdoch University

Professor Simon McKirdy has extensive experience covering corporate leadership, research management, policy development and the management of biosecurity operations within the government and private sectors.

He has international expertise in biosecurity and, in particular, plant biosecurity. He completed his PhD in Plant Pathology at the University of Western Australia.

His career has included the roles of Quarantine Plant Pathologist for the State and Commonwealth governments; Program Manager at Plant Health Australia; eight years as CEO of the Australian Plant Biosecurity Cooperative Research Centre; and Biosecurity Science and Risk Manager at Chevron Australia.

He is Chairperson of the Western Australian Biosecurity Council that provides advice to the Western Australian government through the Minister for Agriculture.

Global best practice to manage and prevent the establishment of contaminating pests

Dr Allan Burne, New Zealand Ministry of Primary Industries

Allan Burne works as a senior adviser in the Plants and Pathways Biosecurity Science and Risk Analysis team for the New Zealand Ministry for Primary Industries, where he specialises in hitchhiker pests including BMSB, spotted lanternfly and tramp ants. Prior to joining MPI, he has worked as an ecological consultant for conservation organizations in New Zealand and building biosecurity capacity and leading ant management programmes in the Pacific.

Building capacity against invasive ants in the Pacific

At high abundance, invasive ants can cause severe economic, environmental, social and public health impacts. In New Zealand, a large proportion of the invasive ant species intercepted are associated with goods imported from the Pacific.

Pacific Biosecurity is a not-for profit team within Victoria Link Limited, Victoria University of Wellington's commercialisation office, which seeks to raise awareness and biosecurity capacity on invasive ants and other contaminant pests in the Pacific. In Tokelau and Kiribati, Pacific Biosecurity, in partnership with regional and in-country agencies, combined programmes to manage the yellow crazy ant (YCA) with workshops building biosecurity capacity. These programmes resulted in reduction in YCA populations to levels where their impacts are near-negligible and provided the local authorities with training and equipment necessary for ongoing monitoring and management.

Dr Andy Sheppard FRES FTSE, CSIRO Research Program Director - Managing Invasive Species and Diseases - Health and Biosecurity & Director of the CSIRO European laboratory

Andy is a population ecologist with an international reputation in biological control and risk assessment focussed on the management of invasions of invasive plants, invertebrates, vertebrates and pathogens. His achievements are broadly divided into three areas, the first being invasive species ecology and population dynamics supporting management - a strong focus on the native versus exotic range comparative approach. Second, risk analysis and prioritisation of biological control options based



on actual and potential, the impacts of both invasive species and biological control agents. Thirdly, major beneficial impacts through leading twelve biological control programs against weeds, invertebrates and vertebrates. Andy is on a number of international science-policy advisory and review committees including the CBD Ad Hoc Technical Expert Group, IPBES Invasive Alien Species Global Assessment and the IUCN Invasive Species Specialist Group.

Emerging technology and future options

Biosecurity systems developed in Australasia have demonstrated effective management of national biosecurity risks and other countries are now adopting similar processes. However, as plant trade increases and many new globally significant plant health threats emerge, largely analogue current biosecurity systems risk failing. New technological solutions will be required to underwrite future biosecurity systems if they are to keep ahead of the curve. This presentation discusses emerging technology and future options for keeping the risks of contaminant biosecurity threats and impacts under control.



Dr Gertraud Norton, Department of Agriculture, Water and the Environment

Gertraud Norton is a scientist with the Pathway Compliance and Operational Science section in the Compliance Division of the Australian Government Department of Agriculture, Water and the Environment. She is currently responsible for the development of policies, surveillance protocols and standards for the National Border Surveillance program within the department as well as for a number of technology innovation projects. Academically, she completed a degree in Agricultural Science - Plant Production at the Technical University of Munich, Germany, and holds a PhD from Charles Sturt University, Australia, with research on the biology and ecology of the cropping weed *Fumaria* sp. in Australia. Since 2009, she has been part of the Biosecurity Group of the department where she has contributed to or led biosecurity policy advice, review and development, biosecurity instructional material development and post-border pest detection emergency responses.

Business Research and Innovation Initiative – Managing the biosecurity risk of hitchhiking pests and contaminants on and in shipping containers

The Business Research and Innovation Initiative (BRII) Challenge program was developed by the Department of Industry, Science, Energy and Resources and commenced with the first round in 2016. By financially supporting a feasibility study and the subsequent proof-of-concept phase, the program is designed to encourage small and medium enterprises to find innovative solutions to government agency challenges. So far, one round of the BRII program has been completed, while the second round is in the proof-of-concept phase.

The Department of Agriculture, Water and the Environment has participated in both rounds of the program. The first round resulted in the development of a device that is currently being field-tested for its capability of detecting BMSB in shipping containers. During the current second round, two companies are developing solutions for the detection of contaminating pests and contaminants on the outside of containers. The presentation will give a brief outline of the approaches taken for addressing the challenges.





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