Hort Innovation

Final Report

Regulatory support and co-ordination

Project leader:

Kevin Bodnaruk

Delivery partner:

AKC Consulting Pty Ltd

Project code:

MT17019

Project:

Regulatory support and co-ordination (MT17019)

Disclaimer:

Funding statement:

This project has been funded by Hort Innovation, using multiple industry research and development levies and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Publishing details:

ISBN 978-0-7341-4703-5

Published and distributed by: Hort Innovation

Level 7
141 Walker Street
North Sydney NSW 2060

Telephone: (02) 8295 2300

www.horticulture.com.au

Content

Content 3

Summary 4

Keywords 5

Introduction 6

Methodology 7

Outputs 10

Outcomes 12

Monitoring and evaluation 13

Recommendations 15

Intellectual property, commercialisation and confidentiality 16

Appendices 17

A1. Ag Chemical Update – October 2018 18

A2. Ag Chemical Update – March 2019 21

A3. Ag Chemical Update – June 2019 23

A4. Ag Chemical Update – October 2019 26

A5. Ag Chemical Update – February 2020 29

A6. Ag Chemical Update – February May 2020 32

A7. Ag Chemical Update – February August 2020 34

A8. Ag Chemical Update –December 2020 37

A9. Ag Chemical Update –March 2021 40

A10. Ag Chemical Update –June 2021 43

A11. Australian Banana Growers Council Article May 2020 46

A12. Greenlife Australia Industry Article June 2020 49

A13. Report on the 51st Session of Codex Committee on Pesticide Residues April 202052

A14. OH&S Application Scenario Summary- Draft Vegetable row crop spraying 69

A15. Outline of project engagement activities 72

A16. Project MT17019 Page views August 2020 to May 2021 74

A17. AgChemical consolidated Regulatory Risk Assessment June 2021 75

Summary

A key factor in the sustainability, productivity and profitability of horticultural industries is the ability to implement successful crop protection strategies. For this to occur growers need to access effective pest management technologies that comply with market and regulatory requirements. However, gaining and/or maintaining access to these technologies can be problematic for many horticultural industries with grower access impacted by government regulatory action, such, chemical reviews of older pesticides; registrant disinterest in developing new pesticides for horticultural markets; changes in pesticide maximum residue limits in export markets; and policy/legislative changes being proposed by State and Federal governments.

This project has sought to assist horticultural industries deal with these issues by providing technical and regulatory support to Hort Innovation and associated industries by seeking to identify and inform Hort Innovation and potentially affected industries of regulatory changes with the potential to impact crop protection product access. The aim has been to provide industries with the opportunity to consider potential impacts and to plan strategically to manage any potentially adverse outcomes, such as seeking regulatory approvals for alternatives.

Older crop protection chemicals are being re-evaluated to ensure they meet contemporary standards in public health, worker safety and environmental safety. When undertaking such reviews regulators require the submission of information covering aspects of use, i.e., current practices in terms of worker exposure and possible environmental impacts, and residues, to cover potential consumer dietary exposures. The absence of such information can result in the removal of crop uses from labels or the products deregistering. The provision of this information can be challenging when older crop protection chemicals are reviewed as the data required to address contemporary areas of risk assessment, may not exist and registrants are either unable or unwilling to make the necessary investment for an older generic product.

This project has, through liaison with the Australian regulator the Australian Pesticides and Veterinary Medicines Authority (APVMA); monitoring decisions of international regulatory agencies, monitoring decisions at the Codex Committee on Pesticide Residues, and liaising with registrants, to identified crop protection products under regulatory pressure, the areas of concern, probable data requirements and likelihood of registrant support.

This information has then been collated and provided to Hort Innovation and conveyed to horticultural industries via quarterly AgChemical Updates and fifty-seven (57) crop specific Regulatory Risk Assessments. The AgChem Updates and the Regulatory Risk Assessments have been made available to industry stakeholders via a project webpage hosted by Hort Innovation. The availability of the documents is communicated to industry representatives through the Hort Innovation “Growing Innovation” publication and the project leader contacting industry representatives directly. The Regulatory Risk Assessments have also been included into each industry Strategic Agrichemical Review Process (SARP) report as they have been updated under projects MT18007, MT19008 and VG18004.

Presentations (in-person and virtual) on the regulatory pressures impacting on maintaining and/or gaining access to crop protection technologies, both domestically and internationally, have also been made at industry meetings for Almonds, Apple & Pears, Bananas, Cherries, Citrus, Mangoes and to the National Fruit Fly Symposium.

From a domestic perspective the project leader has engaged with the APVMA on aspects relating to the chemical reviews of chlorpyrifos, and eight other crop protection products including as phorate and procymidone. This initially was from the perspective identifying critical uses and spray application practices in relation to certain spray application techniques employed, such tractor or backpack spraying. This initial feedback was provided to the APVMA through the project leader or directly by the industry body. The project leader has further engaged with the APVMA to provide more detailed information on work practices, particularly, hours per day worked on different spray application related tasks such as mixing, loading and application, and potential re-entry activities. To this end preliminary information was

gathered through industry liaison and indicative crop specific application scenarios were developed (see Appendix 14 for an example). It is intended that this work continue to be elaborated to enable the APVMA to better refine their worker exposure risk assessments.

The project leader also assisted Hort Innovation in considering and developing responses to Department of Agriculture Water and the Environment consultations on a number of proposed AgVet Chemical legislative reforms. The project leader also sought to engage and discuss with industry groups the proposed regulatory reforms to ensure they were sufficiently informed should they wish to make their own submission.

During the project, discussions have been had with registrants and the APVMA on the dithiocarbamate fungicides, namely mancozeb, metiram, propineb, thiram, ziram and zineb to clarify potential concerns that could impact their long-term future availability. As this information is becoming available it is being conveyed to Hort Innovation and industry groups via the AgChemical Updates.

In developing new pesticides registrants often overlook smaller horticultural industries when seeking registrations. Where needed the project leader has sought to provide support to Hort Innovation in identifying crop protection technologies with the potential to fill pest management gaps, e.g., whether from emerging or new pests (Fall armyworm and Leafminer) or the result of regulatory actions, and where necessary provide technical advice with respect to the generation of data required to gain regulatory approval. This has involved liaison with the APVMA and registrants to confirm data requirements and providing technical assistance to the Hort Innovation Regulatory Affairs, Crop Protection Manager in the preparation of nominations relevant to Hort Innovation priority projects for the AgForum and applications to the Department of Agriculture, Water and the Environment AgVet Chemical Access grant scheme and the Global

The provision of this information was to enable Hort Innovation and the associated horticultural industries to focus attention and investment decisions on crop protection technologies that are less likely to encounter regulatory difficulties in the medium to long-term. Given the complexity associated with crop protection product regulation and the rate at which change is occurring, it is recommended that the regulatory support function in the areas of chemical review, new pesticide access and the status of international chemical reviews through Hort Innovation be maintained.

Keywords

Crop protection; Pest Management; chemical review; pesticide regulation, regulatory support, regulatory risks

Introduction

The Regulatory Support and co-ordination project was a continuation of project *AH13017 Plant protection: Regulatory support and co-ordination*. The support was focused on pesticides subject to review by the Australian Pesticides and Veterinary Medicines Authority (APVMA) where the likelihood of maintaining access was considered problematic; where changes in international approvals and standards had the potential to impact horticultural industries through uncertain access or export industry compliance; where pesticide policy development within Australia could impact industry strategic planning with respect to pest management needs into the future and the availability of new pesticide options. This has involved engaging with the APVMA, other government agencies and registrants

The primary purpose of which, in broad terms, has been to provide a framework that enables Hort Innovation and horticultural industries to consider currently approved crop protection technologies from the perspective of regulatory risk. Where risks are judged high, help inform investment decisions with respect to identifying suitable lower risk technologies. Ultimately, the aim of the project is to contribute to industry sustainability and productivity by helping ensure growers have access to effective pest management tools that meet contemporary standards, both domestically and internationally.

As with other regulatory authorities, the APVMA undertakes chemical reviews, in which pesticides are being re-evaluated against contemporary standards of public health, environmental and worker safety. For many older compounds, due to the development of new risk assessment methodologies, the data required for an evaluation often does not exist. In such situations the likely regulatory outcome will be the removal of uses from labels or loss of approval. Internationally the review process by many regulatory authorities is cyclic with the re-evaluations occurring at set time periods, e.g., every fifteen years in the USA, irrespective of whether concerns exist over a compounds use. For many older generic compounds this has resulted in loss of approval as registrants are either unwilling or unable to fund the necessary data generation.

An objective of the project has been to ensure that Hort Innovation and potentially effected horticultural industries are informed of proposed regulatory actions, their basis, whether there is registrant support and the scope to which the defence of a particular pesticide x crop use is feasible; or seek access alternative solutions should access loss be the probable outcome. As a result Hort Innovation and associated industries have had the opportunity to consider the implications of these regulatory actions and where practicable begin to make strategic decisions on future investment, i.e., whether through data generation or seeking access to new technologies via APVMA minor use permits or label extensions.

The project leader has also assisted Hort Innovation in identifying possible crop protection options for consideration under the Department of Agriculture, Water and the Environment's Chemical Access Grants scheme as well as assisting and supporting Hort Innovation in relation to the Global Minor Use Summit.

The approach taken through this project has been to monitor regulatory activity both domestically and internationally, engage with the APVMA and registrants to gain an understanding of the nature of any regulatory concerns and communicate the situation, i.e., the likely regulatory outcomes, to Hort Innovation and associated industries. In this process the project leader has sought to act as a link between the regulator, the registrants, Hort Innovation and horticultural industries.

There has also been active participation in the Australian delegation to the Codex Committee on Pesticide Residues. This has been important from the perspective of monitoring international developments in areas such as risk assessment, chemical reviews, new pesticides and Codex MRL changes with the potential to impact Australian horticulture. Participation has also ensured that horticultural perspectives are considered by government agencies when developing the Australian government's position on Codex related issues.

Methodology

Work within this project primarily involved issue identification, relaying insights to Hort Innovation and industry stakeholders and providing the technical support to aid in the development of strategies to manage any potential adverse outcomes. The identification of issues related primarily to where regulatory action on crop protection products had the potential to impact grower access. From a regulatory perspective this involved monitoring re-evaluations of crop protection by national and international regulators. The work on regulation was framed within the context of ongoing regular consultation with regulators and registrants. The information was then provided to representatives of Hort Innovation and associated horticultural industries with the aim of giving stakeholders sufficient opportunity to consider the implications of any regulatory actions and formulate responses.

Effective liaison with registrants and the regulator has been a critical element of project activity to clarify the issues, i.e., the nature of any concerns over potentially problematic older generic compounds, and likelihood of registrant support where the legacy registrant may see little value in providing support. Outlined below is a more detailed outline of the methodology followed.

1. ISSUE IDENTIFICATION & APPRAISAL (chemical reviews international and domestic)

a) Crop protection product review/re-evaluation: The project leader has liaised with relevant regulatory authorities, in Australia these included the Australian Pesticides and Veterinary Medicines Authority, Food Safety Australia New Zealand, Department of Agriculture and Fisheries Queensland and Department of Agriculture, Water and the Environment, through face-to-face meetings, telephone or video conferences and email. The project leader also monitored publications originating from international regulators, e.g., European Commission, Health Canada and the United States Environmental Protection Agency, following reviews that could impact on pesticide use and access in Australia. This was to ensure industries were given sufficient forewarning of any proposed regulatory actions to allow the potential impacts to be considered and decisions made on response should adverse impacts be identified.

b) Codex: Attended the Codex Committee on Pesticide Residues (CCPR) meeting in China in 2019 as part of the Australian delegation (see Appendix A13). Due to the pandemic Codex Committee meetings scheduled in 2020 for CCPR and the Codex Committee on Pesticide Residues (CCCF) were cancelled. Participated in panel meetings of CCPR in early 2020. Panel meetings were then suspended due to the cancellation of Committee meetings. The panel meetings have only recently recommenced in 2021. A Codex Committee on Contaminants in Food panel meeting was held in early May and one is planned for the Codex Committee on Pesticide Residues panel in early July. They are hosted by Department of Agriculture, Water and the Environment Canberra. At these meetings agenda items listed for the respective Codex Committees are discussed and an Australian position developed. Most recently issues covered at CCCF included aspects of risk assessment and risk management on mycotoxin food contaminants, as well as the establishment or revocation of Codex standards. The relevance to horticulture is twofold. Firstly, participation in the panel meetings ensures that a horticultural industry perspective is presented for consideration. Secondly, through participation in the panel and Committee meetings issues of interest to horticultural industries can be conveyed back to the Hort Innovation Regulatory Affairs, Crop Protection Manager, if relevant the Hort Innovation Trade team and the potentially affected industries. This can be particularly important where decisions are being made regarding the setting of Codex MRLs and guideline maximum levels (MLs) which can impact on the movement of commodities moving in international trade. In terms of the Codex Committee meetings these are being held virtually in 2021. Codex Committee on Pesticide Residues is occurring in late July, while Codex Committee on Pesticide Residues occurred virtually in May.

c) Registrant perspective: The project leader has maintained liaison with major chemical industry registrants via face-to-face meetings prior to the announcement of the pandemic lockdowns and following loosening of travel restrictions in March 2020. Further contact was maintained via email and telephone. It had been intended to have face-to-face meetings twice a year with representatives of each of the major pesticide registrants, i.e., Adama, AgNova, Arysta, BASF, Bayer, Corteva (Dow/Dupont), FMC, Nufarm, Sipcam, Sumitomo and Syngenta. Due to travel and border restrictions

it has not been possible to meet with all registrants face-to-face. The meetings have canvased the level of support that registrants are likely to provide for pesticides subject to re-evaluation in Australia and overseas and for those pesticides identified as potential candidates for development either as replacements or alternatives, in Australian horticultural crops. This is particularly important as firstly, withdrawal of support would likely see the loss of uses domestically or revocation of Codex MRLs which would impact international trade; and secondly, from a strategic perspective help identify potential replacements for pesticides coming under increasing regulatory pressure in Australia and internationally.

d) Minor Use: The project leader provided support to the Hort Innovation Regulatory Affairs - Crop Protection Manager during the Department of Agriculture, Water and the Environment's AgVet Chemical Access program. This has involved participation in the meetings and providing technical support where required in relation to trial protocols related to data generation.

e) Attend the Global Minor Use Summit. It was not possible to attend the Global Minor Use Summit in person due to border closures. However, Kevin Bodnaruk participated in the online virtual meeting. In addition, Kevin Bodnaruk acted as an Australian industry representative on the Technical Advisory Committee for the Global Minor Use Summit.

f) Maintained regular contact with the Hort Innovation Regulatory Affairs - Crop Protection Manager and industry stakeholders. This contact served to keep Hort Innovation and industries informed of proposed regulatory actions in Australia and internationally that have the potential to adversely affect access to pesticides. Loss of access could not only occur through a registrant not supporting a compound under review but also due to the removal of international standards such as Codex MRLs and MLs resulting in growers having to identify alternative options to meet importing country standards. Through this process, where industry pest management priorities may be impacted, the issues can be identified to provide an opportunity for responses to be considered and coordinated.

g) Helped facilitate responses to the APVMA from industries. This involved seeking feedback from industry representatives in response to APVMA requests for data or information. For the chlorpyrifos review information on its use, such as pests targeted, frequency of application and importance was sought from all crops in which it is approved. This process highlighted that there was a lack of alternative options for the management of soil insects. This information was collated and provided to the APVMA.

The APVMA, in 2019, sought information on critical uses and worker exposure for 11 chemicals, eight of which are approved for use in horticulture - chlorpyrifos, diazinon, diquat, fipronil, malathion, methidathion, paraquat and procymidone. The project leader co-ordinated responses from a number of industries which identified critical uses and sought to clarify aspects related to potential worker exposure. Stemming from this initial request the project leader has engaged with the APVMA to provide information on current work practices to enable the agency to update their occupational health scenarios for risk assessment, first developed in 1998. To this end the project leader initiated the development of indicative scenarios to provide more detailed information on work practices to the APVMA (Refer to Appendix A14 for examples). These scenarios are to be representative and are to be developed in conjunction with industry representatives. To date this has involved preliminary discussions with Apple & Pears, Australia being representative of deciduous fruit crops and Ausveg for row crops.

The project leader also sought to alert export-oriented industries to potentially significant changes proposed in World Trade Organisation Sanitary PhytoSanitary notifications and from Codex. For example, alerting industries to the 2019 JMPR recommendation to withdraw all Codex MRLs for the herbicide clethodim.

At the State and Federal level, the project leader consulted with Horticultural industry representatives as well as State government officers and representatives of other industry sectors such as grains and cotton, in relation to proposals arising from the review of AgVet Chemical legislation being managed by the Department of Agriculture, Water and the Environment. The project leader aided in the preparation of the Hort Innovation responses to this review.

2. TECHNICAL SUPPORT

a) The project leader prepared Regulatory Risk Assessments (RRAs) for fifty-seven (57) crops covered by Hort Innovation. These RRAs outlined the regulatory risks by each crop protection product currently approved for use in each crop. They helped inform industry priority rankings and strategic decision making, by highlighting potential issues related to the various crop protection products, i.e., whether concerns existed over consumer exposure, occupational exposure, environmental or were trade related. These were ranked on whether the risks were acute, i.e., short-term, medium or long-term. Also on an as need basis the project leader provided input into pest management strategic assessments, e.g., SARPs, undertaken by Hort Innovation.

b) On an as required basis the project leader provides technical support on issues to the Hort Innovation Regulatory Affairs - Crop Protection Manager in relation to other crop protection related matters and funded projects dealing with crop protection products, an example was participation in the National Working Party on Pesticide Application in February 2019 and review of generated data in other projects to assess acceptability.

3. INFORMATION EXCHANGE

a) The three four-monthly AgChemical Updates and the fifty-seven (57) Regulatory Risk Assessments were made available to industry participants via the Hort Innovation website at https://www.horticulture.com.au/growers/help-your-business-grow/research-reports-publications-fact-sheets-and-more/mt17019/.

Growers were informed of their availability through the *Growing Innovation* newsletter and via direct contact with the project leader to the industry representatives.

b) The project team also maintained a network of stakeholders from which information was sought and disseminated on matters not covered by the Updates. This involved utilizing email, telephone, face-to-face meetings, participation in industry workshops and providing presentations at industry webinars or conferences, when invited, to disseminate information.

c) Monitored WTO SPS notifications informing industries of proposed changes to regulatory standards in importing countries of potential importance to Australian horticultural industries.

4. DATA GENERATION & SUBMISSION

a) Where data was required to address regulatory gaps related to crop protection products either under review or nominated for review, the project leader was involved in discussions with the agency regarding the type and quantity of data needed. In the area of worker safety this has involved collating information from industry representatives on spray application work practices. Initially focused on chlorpyrifos but with an understanding that worker exposure will be a focus for other crop protection products under review such as diazinon, fipronil and malathion. To begin to address this issue the project has embarked on the development of a number of indicative spray application scenarios based on initial industry feedback (see examples in Appendix A14). These preliminary examples were provided to the APVMA to ensure the data being collated would be relevant. The aim being to progress this activity to ensure the agency has current information to aid in refining their worker exposure risk assessments. Due to travel restrictions and border closures it has not been possible to finalise the development of a comprehensive listing of scenarios on work practices.

b) For pesticides consult with industry and manufacturers regarding support, or otherwise, for their continued use. If supported engage with Hort Innovation R&D Manager with respect to data generation processes and submission.

c) The project prepared a residue data packaged for assessment by the Joint FAO/WHO Meeting on Pesticide Residues (*JMPR*) as part of a re-evaluation of dimethoate for Codex MRLs.

Outputs

- **Quarterly *AgChemical updates to Hort Innovation Communication team for distribution via the Hort Innovation communication network;***

AKC Consulting have produced ten *AgChemical Updates,* which provided alerts and covered a range of chemical regulatory issues both domestically and internationally as well as providing readers with sources for further information. The availability of each Update on the project webpage on the Hort Innovation website was conveyed to industry stakeholders the Hort Innovation publication Growing Innovation publication. https://www.horticulture.com.au/growers/help-your-business-grow/research-reports-publications-fact-sheets-and-more/mt17019/

At the publication of each quarterly AgChemical Update the project team also contacted stakeholders directly including representatives of each industry body to alert them to the availability of the Updates. This allowed the project to distribute information widely to industry participants, such as growers and advisers. For example, for the period from August 2020 to May 2021 the project webpage has been viewed 1,124 times (see Appendix A16).

In addition, two articles have been provided, at industry request, for publication in 2020. These were to the Australian Banana Growers Council and Greenlife Industry Australia. Both articles can be found in Appendix A11 and A12, they can also be found at

- https://abgc.org.au/wp content/themes/abgc/assets/lib/magazine/magazine.html?file=https://abgc.org.au/wp-content/uploads/2020/04/Issue-58-APRIL-2020-WEB.pdf#magazineMode=true
- https://www.greenlifeindustry.com.au/communications-centre/future-challenges-to-plant-protection-product-availability

- ***Aid in deliberations relating to data requirements to support continued access or gaining access to pesticides.***

The project leader has assisted Hort Innovation in the development of project proposals for submission to the Department of Agriculture, Water and the Environment (DAWE) AgVet Chemical Access grant program. This has involved assisting in liaison with the APVMA and registrants on data requirements and grant project proposal submissions.

For full details of all grant outcomes activities please refer to the following link:

- https://www.agriculture.gov.au/ag-farm-food/ag-vet-chemicals/improved-access-agvet-chemicals/agvet-assistance-grants

The project contributed to the Hort Innovation responses to government consultation papers on proposed regulatory reforms. These were the Hort Innovation submission to the Harmonised Agvet Chemical Control of Use Task Group (HACCUT) Options Paper and the Hort Innovation submission to Streamlining Regulation of Agricultural and Veterinary Chemicals in 2018. Refer to link for further information

- https://www.agriculture.gov.au/ag-farm-food/ag-vet-chemicals/better-regulation-of-ag-vet-chemicals/streamlining/public-consultation

The project also contributed to the development of two Hort Innovation submissions to government discussion and consultation papers on AgVet Chemical legislative reform. These were to the initial First Principles Issues paper in March 2020 and then to the Draft Report in December 2020. The final Hort Innovation submissions can found at the following webpage.

- https://haveyoursay.awe.gov.au/agvet-chemicals-regulatory-reform

International Standards/Trade

- ***One report a year arising from the meeting of the Codex Committee on Pesticide Residues***

Kevin Bodnaruk attended panel meetings and the CCPR Meeting in 2019. A report has been provided to Hort Innovation relating to the issues covered by the CCPR in 2019 (see the Appendix A13). No CCPR Meetings occurred in 2020 or prior to the completion of the project in 2021 due to border closures.

AKC Consulting also prepared and submitted a residue trial data package on behalf of Hort Innovation for periodic re-evaluation of dimethoate by the JMPR in 2019. The outcomes of which are to be considered by the CCPR when a virtual meeting, scheduled for later in 2021, occurs.

- ***One report during the project covering a meeting of the Codex Committee on Contaminants in Food***

No CCCF Meeting occurred in 2020 due to border closures. A virtual Meeting occurred in May 2021. Kevin Bodnaruk participated in the virtual panel meeting in which the main issue discussed related to mycotoxins in cereals.

- ***One report following participation in the Global Minor Use Summit during the project;***

A face-to-face the Global Minor Use Summit did not occur in 2020 due to border closures. A brief virtual meeting took place in which prioritization of global needs occurred. The prioritization was based on needs listed nominated by participating country representatives. Australian nominations were submitted via Department of Agriculture, Water and the Environment (DAWE). No Australian need gained support.

- ***Regulatory risk assessments examining pesticides nominated for re-evaluation by the APVMA and Codex which are approved for use in Australian horticultural crops to aid in strategic priority setting.***

AKC Consulting have produced and updated 57 Regulatory Risk Assessments (RRAs) for each commodity covered by Hort Innovation. These RRAs cover all crop protection products approved for use in the crop and provide a guide to the level of threat for each product based on the nature of the threat and regulatory actions of major regulatory and advisory bodies internationally, e.g., Codex, the US EPA, Health Canada and the European Commission. A consolidated listing of the risk assessments for each crop protection product can be found at Appendix A17. The full complement of Regulatory Risk Assessments for each crop can be found at the Hort Innovation website.

- https://www.horticulture.com.au/growers/help-your-business-grow/research-reports-publications-fact-sheets-and-more/mt17019/

- **Communication and Engagement Plan**

A Communication and Engagement Plan was developed and implemented. The focus of the plan has been to i) facilitate awareness and an understanding of potential impacts of chemical reviews within horticultural industries through information sharing; ii) provide information to the APVMA to ensure risk assessments are valid (not based on generic assumptions); iii) through engagement with registrants seek to identify opportunities for collaboration either data sharing or data generation. (Refer to Appendix A15).

Outcomes

The main outcomes of the project relate to **Issue identification** and **Information exchange** elements from the perspective of chemical access**.** From a communications perspective the project's activities has resulted in better informed industry groups on potential threats to crop protection product access, the progress of APVMA chemical reviews, government legislative reform proposals, potentially trade disruptive changes in pesticide standards in export markets and the approval of new products and uses. Conversely, registrants and the APVMA have been better engaged with Australian horticulture through the efforts of Hort Innovation and the support provided by the project.

Hort Innovation and horticultural industries have been regularly informed of potential regulatory threats with the potential to impact access to crop protection products/technologies. This has involved alerting industries to negative regulatory activity taken against a number of crop protection products used currently in Australian horticulture. In particular, industries have been alerted to regulatory actions against chlorpyrifos internationally such as the withdrawal of approval in the EU and Canada; the loss of approvals for a number of dithiocarbamate fungicides in Canada and Europe, the restriction of etoxazole and metalaxyl-M uses to protected situations only and the restrictions on neonicotinoids insecticides in Canada, Europe and the USA. These actions have resulted in the withdrawal of approval or a significant restriction in use in each of these jurisdictions. Also, that a re-evaluation of the dithiocarbamate fungicides, by the Joint FAO/WHO Meeting on Pesticide Residues, has been scheduled for 2023, to examine the basis for Codex MRLs, and the fact that the group has also been nominated as Priority 1 as a future review candidate by the APVMA.

This work has provided industry groups the opportunity to begin to consider what impacts such regulatory actions may have and begin plan strategically to manage any potential negative outcomes on crop protection product access. Allowing Hort Innovation and horticultural industries to be proactive, rather than reactive, in responding to regulatory changes through investment into new chemistry, technologies or best practice adoption 5 years out. In addressing such issues it will result in less reliance on problematic conventional pesticides and aid in the future sustainability of Australian horticulture.

This has been achieved through the provision and distribution of ten (10) AgChemical Updates over the life of the project, the preparation and updating of fifty-seven (57) Regulatory Risk Assessments for each crop covered by Hort Innovation. That the information is being noted can be seen from the project webpage, hosted by Hort Innovation, has received 1,124 pageviews in the period from August 2020 to May 2021 (see Appendix A16). Also, on request presentations were made on chemical access challenges to the following industry groups: Almonds, Apples and pears, Bananas, Cherries, Citrus, Mangoes and to the National Fruit Fly Symposium.

Technical support provided to the Hort Innovations Regulatory Affairs – Crop Protection Manager has contributed to the successful securing of grants from the Department of Agriculture, Water and the Environment (DAWE) AgVet Chemical Access grant program which over 2019 and 2020 consisted of over $2,000,000 in grant funding for 22 projects covering uses in citrus, tropical tree crops (Avocado, bananas, custard apple, lychee, mango, passionfruit and pineapples), berry fruit (Rubus & strawberries), cherries, leafy vegetables (Spinach and silverbeet) and onions.

The project has also assisted the Hort Innovation Regulatory Affairs – Crop Protection Manager in the preparation of emergency use permit applications to aid horticultural industries in the management of the recent Fall armyworm incursion.

Trade related Information exchange has involved monitoring of WTO notifications and Codex Committee on Pesticide Residues decisions and alerting industries to proposed MRL changes with the potential to impact market access.

Monitoring and evaluation

The project objective has been to inform Hort Innovation and related horticultural industries on regulatory threats to currently approved agrichemicals that may negatively impact on future access. The aim has been to ensure that Hort Innovation and potentially affected industries are in a position to consider any impacts and how best to respond strategically, whether a response is warranted and if so, what that response might be, i.e., seek to defend or pursue access to alternative options.

Program elements

Identification of regulatory risks: Through regular liaison with stakeholders, regulators and registrants the project has maintained consistent contact with key industry participants. This has enabled the project to provide Hort Innovation and horticultural industries with 57 Regulatory Risk Assessments on crop protection products relied upon in Australian horticulture. The project has also provided 10 AgChemical Updates, at 3-4 month intervals, reporting on recent developments in crop protection product regulation in Australia and internationally. Access to the documents can be gained via the project webpage on the Hort Innovation site. The dissemination of these documents has been by alerting industry representatives to the availability of documents once uploaded. This approach has been considered successful as there have been 1124 pageviews recorded for the period from August 2020 to May 2021.

Chemical Review/Regulatory support: The project has helped co-ordinate horticultural industry responses to APVMA chemical reviews, e.g., chlorpyrifos specifically and more generally on work rates related to spray application. The project has also contributed the development of the Hort Innovation responses to Department of Agriculture, Water and the Environment consultations on AgVet Chemical legislative reform.

Technical support: The project has provided Hort Innovation support in the preparation of submissions to Department of Agriculture, Water and the Environment AgVet Chemical Access program and clarification of regulatory data requirements w.r.t. potential R&D funding stemming from successful grants and where needed assist in the development of trial protocol outlines for data generation projects.

Below is the Monitoring and Evaluation outline for project MT17019.

Objective	Metric	Method of evaluation	Indicator of success
Chemical review			
Identify agrichemicals under regulatory threat (APVMA and international reviews)	Information on crop protection products under threat has been gathered and provided to Hort Innovation and industry. Level of engagement with the APMA. Level of engagement with registrants Participation in Codex panel and Committee meetings.	Delivery of AgChemical Updates to Hort Innovation for posting on project webpage. Provision of Codex Meeting Report. R&D manager review of milestone reports.	Hort Innovation and horticultural industries regularly informed of regulatory changes. Hort Innovation and horticultural industries have sufficient information when considering strategic pest management requirements. Codex Meeting report for only one meeting due to border closures. Project webpage has received 1124 pageviews in the period from August 2020 to May 2021.
Hort Innovation and industry groups informed of regulatory threats	The Project developed a regulatory risk assessment process utilizing information gathered from Australian and international regulators.	Hort Innovation and industry groups alerted to potential regulatory threats; Regulatory Risk Assessments provided to Hort Innovation and	The project has provided 57 crop Regulatory Risk Assessments to Hort Innovation and potentially affected industries. Hort Innovation and Industries are able to consider regulatory threats in the updating of industry SARPs and R&D funding priorities in response to

Objective	Metric	Method of evaluation	Indicator of success
	The project has collated and provided Regulatory Risk Assessments for the crops covered by Hort Innovation.	potentially affected industries, for posting on project webpage.	those threats. Project webpage has received 1124 pageviews in the period from August 2020 to May 2021.
Clarify importance of those agrichemicals under regulatory threat to potentially affected industries.	The project has engaged with industry stakeholders to gauge the importance of crop protection products under regulatory pressure.	Six monthly work plan, outlining activities undertaken and proposed, provided to Hort Innovation as part of Milestone Reports.	Presentations delivered to industry groups on regulatory threats. These were in person and virtual to Almonds, Apples and pears, Bananas, Cherries, Citrus, Mangoes, Mushrooms and to the National Fruit Fly Symposium.
Chemical access			
Provision of technical support to Hort Innovation w.r.t. regulatory data requirements to either gain or maintain agrichemical access.	The project provided technical assistance to Hort Innovation in relation to participation in domestic minor use forums and Global Minor Use Forum. The project provided technical assistance to Hort Innovation in the preparation of chemical access grant submissions and with respect to satisfying regulatory data requirements.	1) Hort Innovation has received support in the preparation of and submission of grant funding the DAWE Minor use forums and the DAWE AgVet Chemical Access grants. 2) Project participated in virtual Global Minor Use forum. 3) Hort Innovation is able to prepare and provide trial protocol outlines to service providers for data generation work to satisfy regulatory requirements.	1) Hort Innovation has gained over $2,000, 000 in grants for 22 priority minor use projects as part of the DAWE Minor use forums and AgVet Chemical Access grants program. 2) Hort Innovation has had sufficient information to contract trials to meet regulatory requirements for the funded data generation projects.
Trade			
Provision of alerts to Hort Innovation and potentially affected industries of WTO SPS notifications relating to MRL change proposals.	Email alerts provided to Hort Innovation and industry groups following monitoring of WTO SPS notifications on MRL changes.	Hort Innovation and Industries informed of proposed MRL changes Hort Innovation R&D manager review of milestone reports in which activity is detailed.	Hort Innovation and Industries informed of proposed MRL changes are of concern. Presentation delivered to ITAP Presentations which included aspects relating to MRLs and trade delivered to Almonds, Apples and pears, Bananas, Cherries, Citrus and Mangoes

Recommendations

Due to the increasing complexity of crop protection product regulation, it is recommended:

- That Hort Innovation, at a minimum, maintains the current level of activity with respect to crop protection product regulation;
- That activities to co-ordinate industry responses to APVMA chemical reviews continues;
- That activity to provide information on contemporary spray application work practices continues;
- That pressure from international crop protection regulation, on access and standards, continue to be monitored;
- That updates on developments in international crop protection regulation continue to be provided to industry stakeholders via AgChemical Updates and Regulatory Risk Assessments, or similar;
- That Hort Innovation continues to invest in research activities and extension and adoption to assist growers to reduce their reliance on problematic crop protection products whose continued availability is threatened due to regulatory pressures;
- That addressing potential pest management gaps arising from loss of access to currently approved crop protection products or incursion of exotic pests continues as a priority.

Intellectual property, commercialisation and confidentiality

No project IP, project outputs, commercialisation or confidentiality issues to report

Appendices

A1. Ag Chemical Update – October 2018 18

A2. Ag Chemical Update – March 2019 21

A3. Ag Chemical Update – June 2019 23

A4. Ag Chemical Update – October 2019 26

A5. Ag Chemical Update – February 2020 29

A6. Ag Chemical Update – February May 2020 32

A7. Ag Chemical Update – February August 2020 34

A8. Ag Chemical Update –December 2020 37

A9. Ag Chemical Update –March 2021 40

A10. Ag Chemical Update –June 2021 43

A11. Australian Banana Growers Council Article May 2020 46

A12. Greenlife Australia Industry Article June 2020 49

A13. Report on the 51st Session of Codex Committee on Pesticide Residues 2020 52

A14. OH&S Application Scenario Summary- Draft Vegetable row crop spraying 69

A15. Outline of project engagement activities 72

A16. Project MT17019 Page views August 2020 to May 2021 74

A17. AgChemical consolidated Regulatory Risk Assessment June 2021 75

A1. Ag Chemical Update – October 2018

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

WHATS NEW

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

NATIONAL REGULATORY ISSUES

APVMA & Chemical reviews

Extrapolation

The APVMA recently had a document open for consultation on the possible application of extrapolation within and between crop groups, i.e., where use in additional crops can be sought based on data from representative crops. The document outlines the situations in which extrapolation to other crops could be accepted and for which aspects of the risk assessment.

The APVMA are seeking comments with a closing date of October 5th. The document can be found at: https://apvma.gov.au/node/32036

Current review progress

Methiocarb

The APVMA has recently published its proposed regulatory decisions for the molluscicide methiocarb. The general uses in Berry crops, Orchards, Nurseries and Vegetable crops are proposed to be removed from the label. They are to be replaced with individual crop uses in citrus, grapes, strawberries, ornamentals, artichokes, Brassica vegetables, Head lettuce and potato.

The proposed regulatory decisions are open for comment for three month till November 30th.

More information and the full review document can be found on https://apvma.gov.au/node/32341

Chlorpyrifos

Originally planned for completion in September 2017 it is expected that the APVMA's review of chlorpyrifos will be completed either late in 2018 or early 2019. It is understood the delay is in part due to a re-evaluation of the toxicological profile. The outcome of which will determine the extent to which the APVMA will take regulatory action.

Others

Other reviews in progress involving maldison, methidathion and procymidone it is anticipated that completion would be in early 2019.

Department of Agriculture & Water Resources

Chemical access

The Department of Agriculture and Water Resources has announced further rounds of grant applications. It is understood that meetings are planned for December 2018 to discuss prioritisation and project nominations. See the link for more details

http://www.agriculture.gov.au/ag-farm-food/ag-vet-chemicals/improved-access-agvet-chemicals/agvet-assistance-grants

Regulatory reform

The Agvet Chemicals Task Group, which consists of representatives from each state and territory and the Australian Government, released a discussion paper on Off-Label Use Harmonisation. The discussion paper was seeking feedback on framework options with regards to increasing flexibility around off-label chemical use for growers of minor crops. The discussion paper can be found at:

http://www.agriculture.gov.au/ag-farm-food/ag-vet-chemicals/domestic-policy/off-label-use-harmonisation-proposal

New developments

Tokuthion cancellation: In response to APVMA raised concerns over potential issues relating to dietary exposure Arysta LifeScience have voluntarily cancelled the use of Tokuthion Insecticide Spray on table grapes. Arysta have indicated that they are conducting a voluntary recall and that for further information contact **Arysta LifeScience:** Recalls Coordinator on 08 8112 0900.

New Products/Uses

A number of applications for registrations and label extensions have occurred in recent months.

Syngenta have registered **Chairman** (fludioxonil + propiconazole) as a post-harvest treatment for Blue mould, Green mould and Sour rot in citrus.

INTERNATIONAL

Codex

Imazalil and **kresoxim-methyl** have undergone periodic review by the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) during September 2018. The outcome of these reviews will be considered by the Codex Committee on Pesticide Residues in early 2019 with regards to the retention of current international MRLs.

Canada

The Canadian Pest Management Regulatory Agency (PMRA), had proposed the phasing-out of **mancozeb, metiram maneb and zineb** due to "unacceptable risks to human health." It was dietary proposed that all uses in fruit and vegetable crops were to be deleted, with the exception of treatments for potato crops. However, to allow further consultation the decision was withdrawn. A new proposed regulatory decision document is to be published with a 90 day consultation period to follow.

The PMRA has published its re-evaluation decision for **methomyl** and indicated that use in broccoli, cauliflower, Brussels sprouts and succulent shelled peas are to be retained. All other food uses are to be withdrawn. For more information see https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management/public/consultations/proposed-maximum-residue-limit/2018/methomyl/document.html

Also, the target date for a final decision on **imidacloprid** as set for December 2018. The PMRA is proposing to phase-out all the agricultural and most other outdoor uses of imidacloprid over three to five years due

environmental concerns, i.e., potentially harmful to aquatic insects.

Health Canada is also conducting separate pollinator risk assessment on the neonicotinoid class of pesticides, which includes **thiamethoxam** and **clothianidin**.

To further protect pollinators, Health Canada is proposing the following changes to the way clothianidin can be used:

Phase-out of foliar application to orchard trees and strawberries

Phase-out of foliar application to municipal, industrial and residential turf sites

Reduction of pre-bloom application from 2 to 1 for cucurbit (cucumbers, squash etc.) vegetables

Additional protective label instructions for cereal crop uses

To further protect pollinators, Health Canada is proposing the following changes to the way thiamethoxam can be used:

Phase-out of foliar and soil applications to ornamental crops that will result in pollinator exposure

Phase-out of soil application to berry crops, cucurbit crops and fruiting vegetables

Phase-out of foliar application to orchard trees

Foliar application to legumes, outdoor fruiting vegetables, and berry crops would no longer be permitted before or during bloom

Final decisions are expected to be published in late 2018.

Europe

In April, the EU introduced a ban on outdoor use of three neonicotinoids – **clothianidin, imidacloprid** and **thiamethoxam** – which will come into effect in December 2019.

Propineb has not been re-approved for use with any grace period to expire by June 22nd 2019.

The European Commission has recently not re-approved the registrations of diquat, pymetrozine and thiram.

Member states will need to withdraw authorisations for products containing **diquat** by 4 May 2019 at the latest. There will then be a grace period – length to be decided by the member state – to allow use-up of product, which itself must expire by 4 February 2020 at the latest.

Member states will need to withdraw authorisations for products containing **thiram** by 30 January 2019 at the latest. For foliar applications, the subsequent grace period must expire by 30 April 2019, and for all other products, including those used as seed treatments, the grace period must end by 30 January 2020.

Member states will need to withdraw authorisations for products containing **pymetrozine** by 30 April 2019 at the latest. The subsequent grace period must expire by 30 January 2020 at the latest.

USA

The situation regarding **chlorpyrifos** in the US is still unclear. In August 2018 a federal appeals court ordered the Environmental Protection Agency to remove chlorpyrifos from sale in the United States within 60 days.

In addition, individual states in the US are also moving to enact State legislation targeting its use.

A2. Ag Chemical Update – March 2019

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

WHATS NEW

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

NATIONAL REGULATORY ISSUES

APVMA & Chemical reviews

Current review progress

Chlorpyrifos

Originally planned for completion in August 2018, however due to amount and nature of new scientific information that has become available it is expected that the APVMA's review of chlorpyrifos will be completed by mid-2019.

Others

Other reviews in progress involving maldison, methidathion and procymidone it is anticipated that completion would occur during 2019.

Department of Agriculture & Water Resources

Regulatory reform

The Department has flagged that further legislative amendments are to be proposed over the coming year. To be included in these amendments are proposals to change data protection arrangements to provide incentives to registrants to seek expanded labels.

NEW PRODUCTS/USES

A number of applications for registrations and label extensions have occurred in recent months.

Agnova have sought to expand the **cyflufenamid** (Flute®) label to include the control of powdery mildew on strawberries.

Syngenta have sought registration of the SDHI fungicide **pydiflumetofen** for use in turf for dollar spot as well as extend the label for Velista® (**penthiopyrad**). The company has also recently applied to register Minecto Forte® (**diafenthiuron + cyantraniliprole**) for control of certain mite and insect pests in fruiting vegetables and cucurbits.

An application is with the APVMA to extend the Timorex® Gold label to include grape vines for powdery mildew and botrytis control.

ADAMA have applied to extend the label claims of Custodia® Fungicide (**azoxystrobin + tebuconazole**) to include the control of hull rot in almonds and husk spot in macadamias. The company is seeking to extend the Trivor® label to include table and wine grapes for the control of light brown apple moth, scale and mealybug.

ADAMA is also seeking to register the herbicide **carbetamide** (ULTRO®)

Bayer is seeking to add bananas to the Serenade® Biofungicide label for leaf spot

diseases. The company has also sought to register the insecticide **tetraniliprole** (Vayego® 200 SC) use in almonds, macadamia, pome and stone fruit for Lepidoptera control.

Nufarm have applied to extend the label for Botector® Fungicide to include diseases in strawberries and blueberries.

Dow has applied to extend the Expedite® and Transform® labels (**sulfoxaflor**) to include use in nursery stock (non-food).

Eden Research have applied to register Novellus® fungicides which is a combination of eugenol, geraniol and thymol for the control of grey mould/bunch rot (*Botrytis cinerea*) in grapes

INTERNATIONAL

Codex

A number of compounds, including **imazalil** and **kresoxim-methyl** have recently been reviewed by the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) during September 2018. The maximum residue level recommendations of these reviews will be considered by the Codex Committee on Pesticide Residues this coming April. Of possible interest listed below are some recommendations made for a number of commodities exported from Australia.

* Includes nectarines and apricots

Europe

Chlorothalonil - A decision was recently made to not renew the approval for Chlorothalonil. It is anticipated that this will result in a phase-out period and eventual deletion of MRLs.

Dimethoate – The EU has also recently proposed the removal of dimethoate MRLs.

The outcome of the recent review of **chlorpropham** is to not be re-approved. This proposal is currently under consideration.

Propineb has not been re-approved for use with the grace period to expire by June 22nd 2019.

USA

The situation regarding **chlorpyrifos** in the US is still unclear. The proposed MRL revocations have not progressed. The U.S. Court of Appeals for the Ninth Circuit has agreed to rehear its earlier decision. The current MRL will remain in place while the rehearing is conducted.

In addition, individual states in the US are also moving to enact State legislation targeting its use.

A3. Ag Chemical Update – June 2019

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

DITHIOCARBAMATES

The dithiocarbamate group of fungicides are being re-evaluated in several jurisdictions internationally. Outlined below are outcomes of those reviews in different jurisdictions completed to date.

Canada

Re-evaluations have been completed by the Canadian Pest Management Regulatory Agency (PMRA) in 2018 for metiram, thiram, ziram. The review of **mancozeb** is scheduled for completion by June 2020.

Metiram: all uses, other than in potatoes, are being cancelled.

Thiram: all foliar uses on apple, peach, plum, strawberry, celery; sweet potato (sprout root dip); and seed treatment of grasses, dry bulb onion, and alfalfa grown for forage have been cancelled.

Ziram: all uses are being cancelled.

Propineb is not registered for use in Canada.

Europe

Mancozeb: re-authorisation assessment in progress. Completion expected by January 30th, 2020.

Metiram: The re-authorisation assessment completed, with the outcome of non-renewal of approval. The maximum grace period allowed for use to expire on January 30th, 2020.

Propineb: The re-authorisation assessment completed, with the outcome of non-renewal of approval. The maximum grace period allowed for use to expire June 22nd, 2019.

Thiram: The re-authorisation assessment completed with non-renewal of approval. The maximum grace period allowed for use to expire on January 30th, 2020.

Ziram: re-authorisation assessment in progress. Completion expected by April 30th, 2020.

APVMA

The dithiocarbamates have been nominated for review by the APVMA. At this stage no start date has been indicated. It is understood that the intention of the APVMA is to finalise existing chemical reviews before initiating any new re-evaluations. As a result, it is considered unlikely that an Australian review of the group would commence before 2021.

Codex

The Codex Committee on Pesticide Residues has scheduled a review of the dithiocarbamate group for 2021 by the WHO/FAO Joint Meeting of Experts on Pesticide Residues.

Background

The re-evaluations completed to date of the individual dithiocarbamate fungicides have highlighted several areas of concern, from the perspective of maintaining access. The key issues emerging have related primarily to potential dietary exposure (short-term and long-term), the significance of metabolites and the lack of data, in some cases, to address questions relating to these two points.

From the perspective of estimating dietary exposure, residue trial data needs to be available that not only matches current use patterns but also includes analysis of all compounds of interest (e.g., any metabolites identified and the parent compound). In the event data gaps exist the completion of risk assessments can become problematic which invariably results in the use(s) either being cancelled or significantly amended.

From an Australian perspective, the availability of suitable supporting data is of concern. Given many registrations of the dithiocarbamates products pre-date the creation of the APVMA any data previously supplied, when gaining registration, may not meet contemporary regulatory standards.

To try and clarify the local situation registrants are being contacted on likely availability of suitable data, i.e., is there relevant residue trial data available that will support currently approved use patterns.

CHLORPYRIFOS

USA

The US EPA was proposing to allow continued use while it completed its assessment of the science. This review is scheduled for completion in October 2022. However, following several court cases, most recently in April, the U.S. Court of Appeals for the Ninth Circuit ordered the US EPA to finalise their decision by mid-July.

Independently, several US States, e.g., California, Hawaii and New York, have taken steps to prohibit the use of chlorpyrifos.

Canada

The PMRA is proposing to cancel almost all agricultural uses of chlorpyrifos primarily due to environmental concerns. Only a small number of uses have been deemed acceptable, these are:

Standing water - temporary pools for larval mosquito control

Outdoor adult mosquito control

Structural indoor and outdoor (non-residential)

Outdoor ornamentals (container stock only) for control of Japanese beetle larvae

Greenhouse ornamentals

The PMRA consultation on its proposal will close on the 29th of August 2019.

For further information see:

https://www.canada.ca/en/health-canada/services/consumer-product-

safety/pesticides-pest-management/public/consultations/proposed-re-evaluation-decisions/2019/chlorpyrifos/document.html

Europe

The re-authorisation assessment is currently in progress. Completion expected by January 31st, 2020.

APVMA

It is anticipated that the review of chlorpyrifos will be finalised by the end of 2019.

CHLOROTHALONIL

Canada

The PMRA completed a re-evaluation of chlorothalonil in 2018. It was concluded that continued registration was acceptable with the addition of risk-reduction measures to labels. These included restraints on the number of applications, re-entry periods, changes to personal protection equipment and revised buffer zones.

Europe

The re-authorisation assessment has been completed with the outcome being non-renewal of approval. The maximum grace period allowing use is to expire May 20th, 2020.

APVMA

Chlorothalonil has been nominated for review by the APVMA with public health, worker and environmental safety cited as reasons for reconsideration. At this stage no start date has been indicated.

DIMETHOATE

Codex

The Codex Committee on Pesticide Residues has scheduled a review of dimethoate by the WHO/FAO Joint Meeting of Experts on Pesticide Residues for September 2019. Where sufficient Australian trial data was available, Hort Innovations has organised submission to the FAO in order to try and Codex MRLs relevant to several Australian export commodities.

Europe

The EU Commission has recently proposed to not renew the authorisation for dimethoate. At this stage timeframes associated with the withdrawal and any grace periods to allow use of existing products have yet to be determined.

For more information see:
https://www.efsa.europa.eu/en/efsajournal/pub/5454

IMIDACLOPRID

Europe

The EU has moved to cancel all outdoor uses of imidacloprid, due to pollinator concerns. In addition, clothianidin and thiamethoxam have not been re-authorised for use in the EU.

Canada

The PMRA is proposing to cancel foliar application to pome fruit, stone fruit, certain tree nuts and soil application to legume, fruiting vegetables, cucurbit vegetables when grown outdoors; herbs harvested after flowering; small fruit and berries (caneberry; bush berries; low-growing berry; berry and small fruit vine excluding grapes); and ornamentals that are attractive to pollinators and grown outdoors. In addition, there is a significant number of other crops that can't be treated prior to, or during flowering.

For further information see:
https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management/public/consultations/proposed-re-evaluation decisions/2018/imidacloprid/document.html#_Toc514050951

A4. Ag Chemical Update – October 2019

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

NATIONAL REGULATORY ISSUES

APVMA

Chemical reviews

The APVMA have recently sought submissions in relation to critical uses and work rates for a number of compounds currently under review, i.e., 2,4-D, chlorpyrifos, diazinon, diquat, fenitrothion, fipronil, malathion (maldison), methidathion, neomycin, paraquat and procymidone.

Unfortunately, a number of industry groups had challenges with the survey due to some uncertainty over exactly what was being requested and an inability to complete the surveys within the allocated timeframe.

Chlorpyrifos

The first element of the chlorpyrifos review has been published of the Proposed Regulatory Decisions (PRD) in relation to domestic, home garden and public space uses, e.g., amenity turf. The outcome of which is the proposed the deletion of these uses.

It is anticipated that as the APVMA has completed its environmental and toxicological assessments of chlorpyrifos the review of the agricultural uses will be finalised in the near future. Given the areas of concern identified in the previous PRD it seems likely that current uses are likely to come under significant regulatory pressure. The outcome for a number of industries may be the loss of access.

NEW PRODUCTS/USES

A number of applications for registrations and label extensions have occurred in recent months.

Adama have applied to register a co-formulation of **indoxacarb + novaluron** (Plemax®) in brassicas, fruiting vegetables, leafy vegetables and turf.

Arysta are seeking to register a new miticide **acequinocyl** (Kanemite®) for use in pome and stone fruit. Acequinocyl is a Group 20B miticide.

Corteva are seeking to register a organically certified formulation of **spinosad** (Entrust® Organic) for use in fruit, herbs, ornamentals, vegetables and forestry

ISK have applied to registerd the fungicide **Isofetamid** (Kenja® 400 SC) for the control of Botrytis in berries, low growing berries including strawberries, cane berries including raspberries and bush berries including blueberries, in both field and protected cropping situations.

BASF are seeking to register b**roflanilide** and boscalid for use in turf

FMC are seeking to vary the **chlorantraniliprole** (Coragen®) label to extend use in strawberries and protected situation for existing uses.

Innovate AG are seeking to register the insecticide Sero-X® for use against Diamondback moth in brassica vegetables.

Nufarm have applied to registered a **bromoxynil** based product (Maya Herbicide) for the control of broadleaf weeds in bulb onions.

Department of Agriculture

Regulatory reform

The Minister for Agriculture announced in early September an independent review of the regulatory framework for Agricultural and Veterinary Chemicals was to occur with the panel appointed to undertake the task to report back by February 2021.

In addition, the Department is moving ahead with a number of legislative amendments with a Bill currently before parliament. The proposed cover a range of issues and include the establishment of a governance Board, reduce the regulatory burden and provide the potential for extensions to limitation and protection periods, i.e. data protection. The purpose of the latter would be to provide incentives to registrants to seek expanded labels.

INTERNATIONAL

Codex

The recent Joint FAO/WHO Meeting on Pesticide Residues (JMPR) held during September 2019 has recommended the deletion of all Codex MRLs for **clethodim** and **dimethoate**. The recommendations are a result of the meeting being unable to finalise the toxicology assessments due to gaps in the data needed to finalise the assessments. Without finalised toxicological assessments dietary risk assessment could not be completed which resulted in the recommendations to delete all current Codex MRLs.

The recommendation to delete the Codex MRLs will be discussed at next year's Codex Committee on Pesticide Residues meeting. The proposed deletions could be deferred were a registrant to indicate the required data could be provided. Failing that occurring, and the Codex Committee agreeing to the deletion, it is expected the MRLs would be deleted by the middle of 2020 which may potentially impact some export oriented industries that rely on either of the two pesticides.

Europe

A number of compounds have been proposed for non-renewal or restricted renewal in the EU. These include **indoxacarb** and **phenmedipham**. In addition, the approvals for **etoxazole and methiocarb** have not been renewed

Chlorothalonil - A decision was recently made to not renew the approval for Chlorothalonil. It is anticipated that this will result in a phase-out period and eventual deletion of MRLs.

Dimethoate – The EU has also recently proposed the removal of dimethoate MRLs.

The outcome of the recent review of **chlorpropham** is to not be re-approved. This proposal is currently under consideration.

Propineb has not been re-approved for use with the grace period for use expiring on June 22nd 2019.

Thiacloprid. A decision was recently made to not renew the approval for thiacloprid. A grace period for use has not, as yet, been set but is expected to be early 2020.

Dithianon: use has been restricted to non-edible crops only.

USA

In July the US Environmental Protection Agency (EPA) decided to continue the registration of **chlorpyrifos** based products. The agency indicated that it will continue to evaluate chlorpyrifos as part of the ongoing registration review and intend to complete its assessment by the statutory deadline of October 1, 2022.

Nevertheless, the California Department of Pesticide Regulation (DPR) issued cancellation notices for products containing chlorpyrifos. It will no longer be able to be used in California after December 31, 2020.

There has also been action in relation to a number of other compounds in the USA. A district court has entered an order on October 22nd that commits the EPA to completing risk assessments of **carbaryl** and **methomyl** by February 2021, **atrazine** and **simazine** by August 2021 and four rodenticides: **brodifacoum, bromadiolone, warfarin** and **zinc phosphide** by August 2024, on the risks they may pose to protected plants and animals.

A5. Ag Chemical Update – February 2020

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

INTERNATIONAL

Europe

A number of compounds have been proposed for non-renewal or restricted renewal in the EU.

The European Commission voted in December to not renew the approval for the insecticide **thiacloprid**. It has been indicated that Member States may grant a grace period no greater than 12 months.

The phase-out period for outdoor uses of **malathion** in Europe expired on January 29th, 2020. No further field or outdoor use of products containing malathion will be permitted within the EU. Use in greenhouses with a permanent structure will be the only uses allowed.

On December 6, 2019, the European Union announced that it will no longer permit sales of chlorpyrifos after **January 31, 2020**. At that time, Member States will need to withdraw authorizations for products containing chlorpyrifos and chlorpyrifos-methyl as active substances and may implement a grace period, at a maximum of three months, for final storage, disposal, and use.

Meanwhile France has sought to prohibit use of flupyradifurone and sulfoxaflor over pollinator concerns. Despite neither of the two compounds actually approved for use in the country.

New Zealand

New Zealand EPA has recently indicated that "grounds exist to reassess approvals of substances containing **neonicotinoids** used in New Zealand".

It was indicated that the New Zealand decision for reassessment aligned with the recently announced

review planned review of neonicotinoid use in Australia by the APVMA.

USA

The US Environmental Protection Agency (EPA) has released its Proposed Interim Decisions (PID) for the neonicotinoids **acetamiprid, dinotefuran, clothianidin/thiamethoxam and imidacloprid**.

EPA is proposing these five measures:

management measures to help keep pesticides on the intended target and reduce the amount used on crops associated with potential ecological risks;

requiring the use of additional personal protective equipment to address potential occupational risks;

restrictions on when pesticides can be applied to blooming crops in order to limit exposure to bees;

language on the label that advises homeowners not to use neonicotinoid products;

cancelling spray uses of imidacloprid on residential turf due to health concerns.

The US EPA also finalised its review of **glyphosate** and concluded that it is not a carcinogen and concluded that there are no risks of concern to human health when glyphosate is used according to the label.

Nevertheless, it has been reported that Bayer may be considering stopping sales of glyphosate to private users who apply it in their gardens as part of settlement talks with U.S. plaintiffs.

NATIONAL REGULATORY ISSUES

APVMA

Chemical reviews

In late 2019 the APVMA sought submissions on critical uses and work rates for a number of compounds currently under review, i.e., 2,4-D, chlorpyrifos, diazinon, diquat, fenitrothion, fipronil, malathion (maldison), methidathion, neomycin, paraquat and procymidone.

Following completion of the surveys, the APVMA engaged with some industry groups to discuss the information collected. It appears that in relation to chlorpyrifos, occupational health and safety is a major area of concern.

It is anticipated that the review of the agricultural uses of chlorpyrifos will be finalised in early 2020. Given the areas of concern highlighted by the APVMA it seems likely that many current uses will come under significant regulatory pressure. The outcome of which, for a number of industries, may be the loss of access.

New Products/Uses

A number of applications for registrations and label extensions have occurred in recent months.

Corteva are seeking approval for **fluazaindolizine** (Salibro™) nematicide for use in a number of vegetable crops. It is understood that for cucurbits and fruiting vegetables uses will be for both field grown and protected cropping situations.

Corteva are also seeking the addition of pome fruit to the **proquinazid** (Talendo®) label for the control of powdery mildew.

BASF are registering the fungicide **fluxapyroxad** (Sercadis®) for use in apples for Scab, powdery mildew and Alternaria control.

Sipcam are in the process of registering the insecticide **etofenprox** (Trebon®) for fruit fly control in stonefruit (except cherries).

Syngenta are seeking to register the combination product **pydiflumetofen plus fludioxonil** (Miravis Prime®) for use as a fungicide in berries, grapes, leafy vegetables and potatoes.

In the US it is registered for use in a broad

range of crops including brassica vegetables, bulb vegetables, carrots, cucurbits, fruiting vegetables, grapes, leafy vegetables and strawberries.

Bayer are seeking to extend the label for Luna Sensation ® (**fluopyram + trifloxystrobin**) to include various tropical fruits.

A6. Ag Chemical Update – February May 2020

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

INTERNATIONAL

Canada

The Canadian regulator has recently finalised its review of acephate **with cancellation of use in potatoes, cancellation of tree crop applications using airblast/outdoor mist blowers and restrictions around applications close to flowering in crops attractive to pollinators.**

The cancellation of **cyromazine** uses has been proposed for potatoes, leafy vegetables, celery, ornamentals and green house lettuce. Risk mitigation measures have also been proposed for the use in mushrooms.

In addition, **bifenthrin** use is being phased-out with a finalisation date of December 31st, 2020.

Europe

The non-renewal of compounds in Europe continues with non-renewal proposed for the following compounds - Benalaxyl, Beta-cyfluthrin, Bifenazate, Etoxazole, Indoxacarb, Mancozeb, Phenmedipham, Thiophanate-methyl and chlorpropham.

For mancozeb it is anticipated that the deregistration will come into effect in the 3rd Quarter 2020, followed by a possible phase-out period of 6-12 months. EU MRLs would then be set at the default of *0.01 mg/kg.

This adds to the list of previously non-renewed compounds, e.g., bifenthrin, buprofezin, chlorothalonil, cyromazine, dimethoate, fipronil, iprodione, ioxynil, linuron, methomyl and thiacloprid, or had their authorised uses restricted, e.g., alpha-cypermethrin, methoxyfenozide and tolclofos-methyl.

India

The Indian Ministry of Agriculture and Family Welfare issued a draft Banning of Insecticides Order, on May 14th. If it is promulgated it will prohibits the import, manufacture, sale, transport, distribution and use of pesticides listed below. There is a 45 day comment period.

The pesticides on the list are: Acephate, atrazine, benfuracarb, butachlor, captan, carbofuran, chlorpyriphos, 2,4-D, deltamethrin, dicofol, dimethoate, dinocap, diuron, malathion, mancozeb, methomyl, oxyfluorfen, pendimethalin, quinalphos and sulfosulfuron.

New Zealand

New Zealand EPA has finalised its review of paraquat with the placing of greater controls over its use. These include placing some restrictions on the rate that can be applied, droplet size and downwind buffer

zones. More information can e found at https://www.epa.govt.nz/public-consultations/decided/reassessment-of-paraquat/

Thailand

The Thai Ministry of Industry is moving to prohibit the use of **chlorpyrifos** and **paraquat**, with ban to take effect from 1 June 2020. Allied to this is the proposal to drop the MRLs for chlorpyrifos and paraquat to at or below the limit of detection.

USA

The US Environmental Protection Agency (EPA) has released its draft biological evaluations for carbaryl and methomyl. This is the first step in the evaluation process.

What activities are likely to occur post-spraying (e.g., crop checking, harvesting).

Industry groups are being contacted to try and provide this information to the APVMA.

New Products/Uses

Bayer's new insecticide Vayego 200 SC (**Tetraniliprole**) is in the final stages of progressing towards being registered. Crops included on the initial label are almonds, macadamia nuts, Pome fruit and stone fruit.

Janssen Pharmaceutical have applied to register a straight **pyrimethanil** based fungicide Penbotec 400 SC for post-harvest use on citrus.

NATIONAL REGULATORY ISSUES

APVMA

Chemical reviews

The APVMA are seeking further information on the use of chlorpyrifos in order to refine and finalise certain risk assessments. Information sought from potentially affected industries is:

Is it still being used/relied upon?;

If used, what sort of timing, i.e., is it growth stage targeted, and for which pest(s)?;

The application method (e.g., enclosed cab tractor or hand held etc);

The amount likely to be applied on a per hectare basis (i.e., is it the maximum label rate or a lower rate and in what water volume/ha); and

A7. Ag Chemical Update – February August 2020

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

INTERNATIONAL

Canada

Metiram use in Canada is being phased-out with sales ceasing after June 21, 2020 and use allowed until June 21, 2021.

Canadian regulator the PMRA is in the process of re-evaluating kresoxim-methyl (Stroby). It has proposed that continued use was acceptable with additional risk mitigation measures. These include reducing the maximum number of applications per year to 1 or 2, depending upon rate applied, plus buffer zones and amended PPE.

The PMRA is also in the process of registering a new Group 7 (SDHI) fungicide inpyrfluxam from Sumitomo for use in apples.

Europe

In May 2020, the EU published two policy strategies that have been dubbed the Farm to Fork strategy and the Biodiversity Strategy which among a number of objectives proposes that by 2030 pesticide use will be cut in half, with about 30% of cultivated land to be farmed under ecological standards with 10% of fields under fallow. These strategies are under discussion are not expected to be finalised before 2022. Presumably, once finalised and in place any EU uses removed will see a reduction or removal of associated MRLs. This could potentially impact the ability of exporting horticultural industries to comply with new EU standards.

Regarding specific agrichemicals, the continued use of **etoxazole** has been approved in Europe but only on ornamentals grown in glasshouse situations. All food crop and outdoor uses are to be deleted.

Over the next three months the approvals are scheduled to expire for the following compounds Clofentezine, clomazone, deltamethrin, difenoconazole, diuron, fludioxonil, sulphur, tebuconazole. For a number the outcomes in terms of future approvals are uncertain.

Switzerland

Following the EU's lead, the Swiss Federal Office for Agriculture has mandated that chlorpyrifos may no longer be used. The prohibition came into effect on July 1st 2020.

New Zealand

Belchim Crop Protection is seeking to register the herbicide metobromuron in New Zealand. It is Group C herbicide for pre-emergent broadleaf weed control in potatoes.

USA

Two agchem related Bills have recently been introduced into the US congress. One is referred to as the '**Protect Against**

Paraquat Act' If passed it would require the US EPA to cancel the registration of all uses of paraquat, ban paraquat residues on food and prohibit the sale and use of existing stock of paraquat. The second is called the "**Protect America's Children from Toxic Pesticides Act**" It also specifically targets organophosphates, neonicotinoids and paraquat and would require the US to suspend use of pesticides the EU or Canada says are unsafe until reviewed by EPA.

The US Environmental Protection Agency (EPA) has released its draft biological evaluations for carbaryl and methomyl. This is the first step in the re-evaluation process.

NATIONAL REGULATORY ISSUES

APVMA

Chemical reviews

The APVMA has finalised its review of 2, 4-D requiring a number of label amendments. These include new spray drift restraints such as droplet spectrum and downwind buffer zones; timing restrictions for crops x region.

Further information can be found at https://apvma.gov.au/node/73206 .

New Products/Uses

Active ingredient approvals

For an active ingredients/constituents to be used in agricultural chemicals intended for sale and use in Australia they must first be approved by the APVMA. Applications for approval can be submitted before an application for registration or at the same time. Listed below are recent applications to approve new active ingredients.

An active ingredient approval has been sought for **aclonifen**, a new pre-emergent broadleaf weed and grass herbicide with a novel mode of action. It is registered in Europe by Bayer for use in potatoes, legume vegetables and cereals.

An active ingredient approval from the APVMA has been sought to allow the use of the chemical **methiozolin** as a new turf herbicide by Colin Campbell Chemicals. It is a benzyl ether and member of the Q herbicide mode of action group.

In May Syngenta have sought an active ingredient approval, in conjunction with a registration, for their new insecticide **isocycloseram** for use in citrus and various vegetables. It is a member isoxazoline chemical family, belongs in the Group 30 insecticide mode of action group and is understood to have broadspectrum activity. It is expected to be launched in 2021/22 under the trade name of Plinazolin.

An active ingredient approval to allow the use of **cyflumetofen**, a Group 25 acaricide, in AgChem products has been sought by the Japanese company OAT Agrio. It is registered in the USA by BASF for the management of spider mites in a number of crops including citrus, grapes, pome fruit, stone fruit, tomatoes tree nuts and ornamentals.

Label extensions & registrations

Corteva have recently registered an organically certified formulation of **spinosad** (Entrust® Organic) for use in fruit, herbs, ornamentals, vegetables and forestry with a product launch planned for October.

ISK's fungicide **isofetamid** (Kenja 400 SC) is in the final stages of gaining approval for the control of Botrytis in Berry crops for both field and protected.

Syngenta are also seeking to register Miravis Prime fungicide (**Pydiflumetofen + fludioxonil**) for use in grapes for the control of Botrytis and powdery mildew.

Novellus fungicide (Group 46) containing the plant oils **eugenol, geraniol and thymol** was registered in August 2020, by Eden Research PLC, for botrytis control in grapes. It will be marketed in Australia by Sipcam.

The control of Downy mildew in bulb onion, spring onion, leafy vegetables including brassica leafy vegetables, cucurbits, beetroots are being added to the Zampro label (**dimethomorph + ametoctradin**) following data generation via Hort Innovation strategic projects ST16006 and ST17000.

Paraffinic Oil labels are being updated with the re-entry period in bananas reduced to nil from the current 1 day.

A8. Ag Chemical Update –December 2020

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

INTERNATIONAL

Brazil

The Brazilian national health surveillance agency (Anvisa) banned paraquat in Brazil. From September 22, 2020, it prohibited from use or production in the country.

Canada

The review decision for mancozeb **was recently published**

The key outcomes are:

1) A number of uses were considered acceptable, e.g., foliar application to potatoes, apples, onions, sugar beets, ginseng, field cucumbers, field tomatoes, grapes, pumpkin, squash, and melon (including cantaloupe but excluding watermelon) and in-furrow application to onions;

2) A number of uses are to be cancelled, e.g., all seed treatments (including potato seed piece treatment), greenhouse uses, use on pears, carrots, celery, lettuce, watermelon, lentils, wheat, alfalfa grown for seed, as well as ornamentals and forestry;

3) Of the uses considered acceptable modified use patterns have been proposed, as risk mitigation measures. Depending on the crop, this has involved lengthened re-entry and harvest intervals, reduced maximum rates and numbers of applications;

4) The PMRA flagged that new mancozeb MRLs will be proposed based on the revised use patterns with a level of 0.05 mg/kg indicated for the metabolite ETU.

https://www.canada.ca/en/health-canada/services/consumer-product-safety/reports-publications/pesticides-pest-management/decisions-updates/reevaluation-decision/2020/mancozeb.html

A re-evaluation of linuron **was also recently completed by the PMRA. This has seen the cancellation of the majority uses on the labels. For the remaining uses, i.e., asparagus, carrots, parsnips and potatoes, a limit has been placed on the maximum annual amount that can be applied.**

Canada has indicated that the final decision on **chlorpyrifos**, following the environmental assessment, will be published in December. A human health assessment has been scheduled to begin in 2021.

Europe

The EU Commission committee (EU Standing Committee on Plants, Animals, Food and Feed (SCoPAFF)) has recently supported the European Commission's proposed non-renewal of **mancozeb**'s authorisation. The implementing regulation is still to be finalised but the draft indicated that a grace period could be no more than 6 months from the date of the regulation

coming into force. On that basis it is expected that use will no longer be allowed in the EU by mid-2021, with MRLs likely to drop to 0.01 mg/kg some time thereafter.

Benalaxyl and **fenamiphos** have both not had their authorisations renewed by the European Commission. Following the expiry of any grace periods, the maximum residue limits (MRLs) are likely to be lowered to the default level of 0.01 mg/kg

The EU Commission has also recommended the withdrawal of **penflufen**, a fungicide contained in the in furrow treatment Emesto Prime for use in potato production

UK

The UK Chemicals Regulation Directorate (CRD) announced an end to the use of **pencycuron** (Monceren), as of 25 March 2020, and growers are advised to look at alternatives.

The product is a dry powder formulation applied to seed tubers at planting to control Rhizoctonia solani, a pathogen that causes symptoms such as tuber black scurf and stem canker.

France

France is introducing restrictions on the use of glyphosate, with the total amount that can be applied per year reduced by 60% for orchards and field crop fields, and by 80% for vineyards. The aim is to phase out use completely within the next 2-3 years where alternative are available.

New Zealand

The NZ EPA has recently announced they will be re-evaluating **chlorpyrifos** and **chlorpyrifos-methyl**. It has been indicated that reassessment process will involve public submissions next year.

.

Thailand

Update on implementation date for new MRLs, following the Thai ban of chlorpyrifos, chlorpyrifos methyl and paraquat

Subsequent to the banning of chlorpyrifos, chlorpyrifos methyl, paraquat, the Thai Ministry of Public Health (MOPH) has proposed to revise Annex 1, List of Hazardous Substance Type 4 (banned pesticide), and Annex 2, Maximum Residue Levels (MRLs), of Notification of the Ministry of Public Health, No. 387 (B.E. 2560) (2017). The date of entry into force is 1 June 2021.

The outcome of which will be that **chlorpyrifos** and **paraquat** MRLs for fruits and vegetables are to be set at 0.005 mg/kg for both compounds.

USA

The US EPA released interim registration decisions for 13 pyrethroids and paraquat in October. For paraquat it has proposed a number of label changes for risk mitigation purposes and indicated that health risks were minimal if label directions were followed.

https://www.epa.gov/ingredients-used-pesticide-products/paraquat-dichloride

The interim decisions for pyrethroids related to bifenthrin, cyfluthrins, deltamethrin, esfenvalerate, permethrin and tau-fluvalinate EPA has proposed focus on better protecting applicators and their surroundings, reducing runoff and spray drift

https://www.epa.gov/ingredients-used-pesticide-products/registration-review-pyrethrins-and-pyrethroids

And finally, the ban on the use of chlorpyrifos in California will come into effect at the end of December this year.

NATIONAL REGULATORY ISSUES

APVMA

Chemical reviews

Chlorpyrifos

The APVMA has indicated they aim to finalise the chlorpyrifos review in early 2021. The APVMA is proposing, as a first step, to publish the technical modelling upon which the various risk assessments are based. The aim being to provide users/registrants etc an opportunity to provide feedback as to the accuracy/relevance of the parameters used in the modelling. Once that is completed, and depending on the amount of refinement that might be required, the risk assessments would be updated and the proposed regulatory decisions finalised. The intention would then be to release the proposed decisions for consultation and further discussion.

Dithiocarbamates

The dithiocarbamate group has been nominated for review by the APVMA and is likely to start within the next two to three years. The outcomes of the Canadian review are potentially important as they provide a guide to the possible areas of concern. It is also worth noting that not all uses were supported and that many retained uses required revised use patterns to mitigate risks.

Further information on the compounds previously nominated for review can be found at

https://apvma.gov.au/node/10876

New Products/Uses

Label extensions & registrations

Adama have recently registered Plemax Insecticide (Indoxacarb 320 g/L + novaluron 80/g/L)

For the control of various insects in brassica vegetables, fruiting vegetables other than cucurbits, leafy vegetables and turf.

.

ISK's fungicide **isofetamid** (Kenja 400 SC) was registered in September for the control of Botrytis in Berry crops (Cane berries, bush berries and strawberries) for both field and protected.

Bayer has registered **tetraniliprole** (Vayego & Vayego Forte) a new Group 28 diamide insecticide in August for the control of banana weevil borer.

A9. Ag Chemical Update –March 2021

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

INTERNATIONAL

Canada

The review decision for chlorpyrifos **was published with the cancellation of all outdoor uses mosquito control, non-residential structural insect control, outdoor ornamentals and greenhouse ornamentals. The cancellation of use in canola and garlic will be delayed by two years to allow growers to find alternative management solutions.**

Also on the review front, the PMRA is in the process of finalising reviews of **pyriproxyfen**, **fenhexamid** and **tebufenozide** with proposed regulatory decisions indicating that products containing these chemicals meet current standards for protection of human health and the environment when used according to the revised conditions of registration.

The PMRA recently approved the registration of **Broflanilide**, in the product Cimegra ™ targeting wireworms as an in-furrow treatment in potatoes.

Europe

The EU has renewed the approval for **abamectin** but for use in permanent greenhouses only. It has also proposed the withdrawal of the authorisation for **alpha-cypermethrin**.

As previously reported the EU Commission has formally announced the withdrawal of the **mancozeb** authorisation with all Member States to withdraw authorizations by July 4, 2021. However, a grace period can be granted by a Member State and "*that period should at the latest, expire on January 4, 2022*". [Commission Implementing Regulation (EU) 2020/2087]

In addition, the authorisations for **fenoxycarb**, **imidacloprid, haloxyfop, myclobutanil** and **pencycuron** have either expired or will expire over the next few months. Following the expiry of any grace periods, the maximum residue limits (MRLs) for these compounds are likely to be lowered to the limit of quantification.

Germany

The German government following endorsing an Action Program for Insect Conservation has proposed an "insect protection law" which, amongst a number of initiatives, seeks to reduce the use of pesticides. These include measures to ban the use of insecticides and herbicides in national parks and limit pesticide use near major water bodies. Also included in the Bill is the phasing-out the use of **glyphosate** by the end of 2023.

Mexico

Mexico's Agriculture Department has proposed rules for phasing out the use of **glyphosate** by the end of January 2024.

New Zealand

The NZ EPA has recently begun reassessing the hazard classifications for **flumioxazin, Tea tree oil, pymetrozine** and **chlorpropham**.

UK

Bentazone is coming under pressure in the UK over ongoing detections in ground water. The Environment Agency has indicated that industry must reduce the levels and numbers of detects in water in order for it to be considered for re-approval in 2025.

The Health and Safety Executive of DEFRA in the UK have proposed all MRLs for **dimethoate** and **omethoate** be lowered to the limit of quantification. The MRLs are to come into force from the 3rd of December 2021.

USA

The US EPA released interim review decision for **chlorpyrifos** in December for public comment. The EPA has proposed a range of risk mitigation measures such as use limitations, rate reductions, engineering controls and extended crop re-entry intervals. The consultation period ended in February.
https://www.regulations.gov/document/EPA-HQ-OPP-2008-0850-0964

NATIONAL REGULATORY ISSUES

APVMA

New Products/Uses

Label extensions & registrations

BASF

BASF applied in January to register a new insecticide **Axalion™ Insecticide** (dimpropyridaz), a pyrazole carboxamide with a novel mode of action, for the control of whitefly, aphid, and thrips in leafy vegetables, brassica vegetables, fruiting vegetables, including cucurbits. Pending regulatory approvals, BASF expects first market introductions in Australia of Axalion-based products by late 2022 or early 2023.

BASF also applied in January to extend the label of their fungicide **Belanty® Fungicide** to include uses in almonds (blossom blight, shot hole and hull rot and leaf rust) and macadamia nuts (husk spot).

The company has also applied to register **Xzemplar® Fungicide** (fluxapyroxad) in February, and **Maxtima® Fungicide** (mefentrifluconazole) in December 2020 for leaf spot, dollar spot and fairy ring for disease control in turf.

Bayer

Bayer CropScience have applied to the APVMA to extend their labels for **Balance® 750 WG Herbicide** (isoxaflutole) and **Sencor® 480 SC Herbicide** (metribuzin) to include use in pineapples. This is an outcome of a Hort Innovation project ST15029 - Crop protection replacement for diuron in pineapple industry.

Luna® Experience Fungicide label extension application was submitted to the APVMA in November 2020 to include the control of powdery mildew and botrytis bunch rot in table grapes.

Sivanto® Prime (flupyradifurone) label extension submitted in October 2020 to include Fruit spotting bug in a number of tropical fruit tree crop such as avocados, mangoes, and papayas; whitefly in vegetables such as cucurbits, eggplant, peppers, green beans, potatoes, sweet potatoes, and aphids in cucurbits, potatoes. The use in tropical tree crops for fruit spotting bug is an outcome of collaboration with Hort Innovation via project MT12024.

Bayer has also sought registration of **Cambalio® 20SC fungicide** (fluoxapiprolin) for Downy mildew control in grapes **Routine 200SC** isotianil for the control of leaf spot diseases in bananas.

Nufarm

Botector Fungicide (***Aureobasidium pullulans*)** has recently been registered for uses in fruiting vegetables for Botrytis and suppression of Sclerotinia.

Nufarm Amishield 500WG Fungicide (amisulbrom) is now registered for use in brassicas (Club root and damping off) and potatoes (pink rot and powdery scab).

Syngenta

The company has also submitted label extension for **Seguris Flexi ®** (isopyrazam) in September 2020 and for **Amistar® 250** (azoxystrobin) in December 2020 for the control of almond diseases such as brown rot and rust.

Innovate Ag applied in January to the APVMA seeking to add new uses against Silverleaf whitefly and thrips in brassicas and cucurbits to its **Sero-X Insecticide** label.

Suttera are seeking to register mating disruption products **Rescalure** and **CheckMate** CRS for Red scale in citrus.

A10. Ag Chemical Update –June 2021

MT17019 – Regulatory Support & Co-ordination

Project Leader & Author: Kevin Bodnaruk, AKC Consulting Pty Ltd

Below is a summary of various regulatory issues and chemical reviews currently underway both locally and internationally.

DITHIOCARBAMATES

Dithiocarbamate fungicides, e.g. mancozeb, metiram and thiram, are currently approved for use in Australia in a wide variety of fruit and vegetable crops.

Over the last few years the group of have been undergoing re-evaluations by a number of regulatory authorities. Recently completed reviews by the EU and Canada have not resulted in many positive outcomes. Outlined below is a summary of the actions taken by the various regulatory authorities.

Canada

Canada has completed reviews of mancozeb, metiram, thiram and ziram (propineb has no Canadian approval). The results of these reviews are as follows:

for mancozeb many uses have been deleted and those remaining have had use patterns significantly amended, e.g., reduced limits on the number of applications and extended withholding periods;

for metiram use has been restricted to foliar applications in potatoes only;

for thiram only seed treatments have been retained; and

for ziram all uses have been cancelled.

Europe

Propineb's authorisation was withdrawn in June 2018, the period of grace (allowing final use) expired June 2019.

Mancozeb's authorisation will expire in July 2021, the period of grace (allowing final use) will expire January 2022.

Thiram's authorisation was withdrawn in January 2019, the period of grace (allowing foliar use) expired in April 2019, the period of grace for seed treatment use expired January 2020.

Metiram currently authorised for use with the expiration of approval set for January 2022. It is currently under review with only use in grapes and potatoes supported.

Ziram is currently authorised for use with approval set to expire in April 2022. It is also listed as a candidate for substitution.

India

In 2020 Ministry of Agriculture and Farmers Welfare issued a **draft order** proposing to prohibit the manufacturing, sale, and import of 27 pesticides including mancozeb, thiram, zineb and ziram.

USA

Mancozeb, thiram and ziram are listed for review in the U.S. under the EPA's 15-year re-registration schedule. Draft Risk Assessments are expected to be published for public comment during the 2021/22.

Codex

The dithiocarbamate group of fungicides have been scheduled for periodic re-evaluation for

toxicology and residues by the 2022 Joint FAO/WHO Meeting on Pesticide Residues (JMPR). Assuming the re-evaluations go ahead, recommendations for maximum residue levels from the 2022 JMPR meeting will be discussed by the Codex Committee on Pesticide Residues (CCPR) in 2023. CCPR is the body responsible for establishing Codex MRLs, which cover treated commodities moving in international trade.

APVMA

The APVMA listed the group as priority 1 for review in 2015; with worker and dietary exposure indicated amongst key issues. It is believed that the Australian review will follow the JMPR re-evaluation in 2022.

INTERNATIONAL

Canada

The proposed re-evaluation decisions for difenoconazole **and** pymetrozine **have been published. For difenoconazole risks were shown to be acceptable when difenoconazole is used according to the proposed conditions of registration**. **For pymetrozine the proposed decision is that continued use was acceptable in glasshouse situations only. All outdoor uses are to be cancelled.**

The PMRA has also finalised its reviews of **clothianidin** and **thiamethoxam** in relation to risks to aquatic invertebrates. For both compounds this has meant the cancellation of some horticultural uses, e.g., in-furrow application in potatoes, and changed conditions of use for some seed treatments and foliar uses, e.g., reduced maximum rates and/or numbers of applications.

A reduction of MRLs for **lambda-cyhalothrin** to 0.01 mg/kg has been proposed due to dietary exposure concerns.

The re-evaluation decision for **chlorpyrifos** has recently been updated and all chlorpyrifos uses/products, including those that remained registered following the environmental risk assessment have been cancelled. The Last date of sale by a registrant: 10 December 2021. Last date of sale by retailers: 10 December 2022. Last date of use for all chlorpyrifos uses/products: 10 December 2023

Europe

The European Commission is considering limiting the use of **sulfoxaflor** to protected cropping situations only.

Phosmet is also being considered for non-inclusion due to ecotoxicological concerns.

Isopyrazam (Seguris Flexi) is also being considered by the European Commission for withdrawal. Currently it is authorised until the 31st of March 2023 after which time the product approvals in Member States will expire. It is expected that all EU MRLs will drop to LOQ possibly in 2024.

Austria

The Austrian government has agreed to a partial ban on the use of **glyphosate**. The Austrian pesticide law has been amended to ban the use of glyphosate on “sensitive” areas which include publicly accessible areas like playgrounds, and parks, and areas designated for vulnerable groups of people like health institutes and retirement communities. I t also prohibits private use in home and community gardens. Professional use of glyphosate including most applications in agriculture remain permitted.

New Zealand

The NZ EPA is seeking information on the use of various organophosphates and carbamate

insecticides from the perspective of potentially initiating a reassessment. The list of insecticides includes **carbaryl, malathion, methiocarb** and **methomyl**. It is also seeking information on the use of **glyphosate** as a first step in deciding whether to change the rules around its use.

USA

At the end of April the U.S. Court of Appeals for the Ninth Circuit instructed the US EPA to publish a legally sufficient final response to the 2007 petition to ban **chlorpyrifos** within 60 days. The court indicated that the EPA response must be a final regulation that either revokes or modifies all chlorpyrifos MRLs and makes the requisite safety findings based on aggregate exposures.

Chlorothalonil and **tebuconazole** are under review as part of the US EPA's periodic review program. Most recently the availability of draft risk assessments were announced for public comment with a closing date of July 20th

NATIONAL REGULATORY ISSUES

APVMA

New Products/Uses

Syngenta

Syngenta have applied to register **Miravis®** **Duo** (difenoconazole + pydiflumetofen – Group 7 and Group 3 fungicides) for the control of various diseases in fruiting vegetables, cucurbits, root vegetables and celery.

Sumitomo

Sumitomo are seeking to register inpyrfluxam (**Excalia**™), a new Group 7 fungicide, for the control of Rhizoctonia in potato and yellow sigatoka in bananas.

Label extensions & registrations

Bayer

Bayer CropScience are seeking to extend the **Movento®** label to include pineapples and blueberries. The company has also applied to expand the **Luna® Sensation** label to include uses in cane berries, strawberries and green beans.

Corteva

Corteva have applied to add macadamia nuts to the **Expedite® Full** (sulfoxaflor) label.

ISK

ISK have applied to extend the label for **Kenja**® (isofetamid) Fungicide to include the control of control of Sclerotinia in green beans and lettuce.

Nufarm

Nufarm have registered bromoxynil butyrate (**Maya®** Herbicide) for use broadleaf weed control in bulb onions.

A11. Australian Banana Growers Council Article May 2020

The article can be found at https://abgc.org.au/wp-content/themes/abgc/assets/lib/magazine/magazine.html?file=https://abgc.org.au/wp-content/uploads/2020/04/Issue-58-APRIL-2020-WEB.pdf#magazineMode=true

Banana growers have recently been invited to take part in reviews into the future use of agrichemicals. Consultant Kevin Bodnaruk answers a series of questions to help explain the current climate in the agrichemical industry. Kevin has more than 30 years' experience in the areas of pesticide development, use and regulation. He is currently working with agricultural industries, government agencies and research and development corporations and in the area of pesticide regulation and risk assessment

What are the biggest changes and challenges in the agrichemical industry for horticulture?

Aside from managing resistance and incursions of exotic pests and diseases, I think a big challenge for horticulture will be ensuring there are enough tools for growers to manage their pest, disease and weed problems.

Firstly, there has been a continuing trend in company mergers and acquisitions reducing the number participating in the farm chemical market. As a result, there is likely to be fewer companies involved in research, plus rationalising of existing product portfolios, which in the mid-term, could result in fewer new chemistries/technologies being developed and brought to market.

Secondly, in global terms Australia is a relatively small farm chemicals market, with herbicides making up more than half. For horticultural industries, gaining access to new technologies could become more difficult as the cost of developing uses for many of the smaller Australian horticultural industries may not be seen as commercially justifiable.

Thirdly, for export-oriented industries, the challenge will be how best to ensure compliance with importing countries standards. At the moment, Maximum Residue Limit (MRL) setting is not globally harmonised. MRLs can differ between countries, which can make compliance difficult. This means growers may have to exclude a farm chemical to ensure their exported produce complies with an importing country's standards.

Lastly, regulatory pressures on farm chemicals are increasing internationally and in Australia. Older chemistries are being re-evaluated to ensure they comply with current health and environmental standards with regulators applying newer risk assessment methodologies.

The scope of pest management options available to growers is finite, so any factor that potentially reduces options can have an impact.

What are the issues that industry needs to be concerned about in relation to chemical/pesticide use in the banana industry moving forward?

I think probably the main issue moving forward will be access to new technologies that best fit with industry practices and constraints. The relatively small size of the Australian farm chemical market can often result in new technologies, when brought to Australia, being initially developed in major crops, delaying access for minor crops. This can often result in a lag of a number of years before a registrant seeks to expand label uses, assuming it has a fit.

A positive of the Australian regulatory system is the ability to gain permitted uses. Where the Australian Pesticides and Veterinary Medicines Authority (APVMA) is satisfied a proposed use complies with regulatory standards, off-label uses can be approved allowing growers to access new pest management options. This provides a potential pathway to gaining access earlier to a new technology or to an existing option where a gap has been identified.

Recently, growers have been invited to provide feedback to reviews on current pesticide/chemical use in horticulture industries? What is driving this?

Australia applies a risk-based approach when assessing farm chemicals. The risk assessment methodologies, now employed by the regulatory authorities have progressed, so the purpose of the reviews is to ensure approved uses meet those contemporary health and environmental standards. As most of the chemicals under review were last assessed some time ago, it has been seen as prudent that they be re-evaluated. To try and ensure their risk assessments are based on current practices the APVMA seeks input on specific work practices.

Some chemicals could be lost to the banana industry? What are the implications for growers?

I would expect that the implications could be significant, should the outcome of a chemical review be the cancellation of a use, particularly if it involves something that is widely used. Where cancellation is recommended, industry would need to consider whether an alternative is needed, engage with registrants and the APVMA, particularly if access via an APVMA permit is the best pathway in the first instance.

What should industry and *growers* be doing moving forward to ensure access is maintained to agrichemicals?

I believe the thinking around pest management going forward needs to be strategic. To be effective this will need stakeholders to be well informed. To achieve this, it is going to require industry engagement with the registrants and the regulator regarding specific chemicals, and the government where policy initiatives are being considered.

What are the challenges of maintaining or retaining access to chemicals/pesticides?

The challenge for industries will be to recognise that this is a possibility for many older farm chemicals and the need to be strategic when considering currently available pest management options. Satisfying regulatory requirements for an old farm chemical could be prohibitively expensive with no guarantee of a positive outcome, whereas pursuing a newer technology may be a more effective approach from a long-term perspective.

A12. Greenlife Australia Industry Article June 2020

The article can be found at https://www.greenlifeindustry.com.au/communications-centre/future-challenges-to-plant-protection-product-availability

What are the biggest changes and challenges in the agrichemical industry for horticulture?

Aside from managing pesticide resistance and incursions of exotic pests and diseases, going forward I think a big challenge for horticultural industries will be ensuring there are enough tools for growers to manage their pest, disease and weed problems.

The pool of available pesticide choices is decreasing with the number of existing options declining and fewer new replacements being developed. From a Nursery Industry perspective this is a result of three main drivers. Firstly, there has been a continuing trend in company mergers and acquisitions reducing the number of manufacturers developing new products. As a result, there is likely to be fewer companies involved in research, plus following mergers we see a rationalising of existing product portfolios, which in the mid-term, could result in fewer chemistries/technologies being retained or developed and brought to market.

Secondly, in global terms Australia is a relatively small plant protection market, with herbicides making up more than half. For horticultural industries, gaining access to new technologies could become more difficult as the cost of developing uses for many of the smaller Australian horticultural industries may not be seen as commercially justifiable when looked at on a global cost-return basis.

Lastly, regulatory pressures on farm (production nurseries) chemicals are increasing internationally and in Australia. Older chemistries are being re-evaluated to ensure they comply with current health and environmental standards with regulators applying newer risk assessment methodologies, for which data is often unavailable.

The scope of pest management options available to growers is finite, so any factor that potentially reduces options can have an impact.

What are the issues that industry needs to be concerned about in relation to chemical/pesticide use in the nursery industry moving forward?

I think probably the main issue moving forward will be access to new technologies that best fit with industry practices and constraints. The relatively small size of the Australian farm chemical market can often result in new technologies, when brought to Australia, being initially developed in major crops, delaying access for minor crops. This can often result in a lag of a number of years before a registrant seeks to expand label uses,

assuming it has a fit.

A positive of the Australian regulatory system is the ability to gain permitted uses. Where the Australian Pesticides and Veterinary Medicines Authority (APVMA) is satisfied a proposed use complies with regulatory standards, off-label uses can be approved allowing growers to access new pest management options. This provides a potential pathway to gaining access earlier to a new technology or to an existing option where a gap has been identified.

Note: Greenlife Industry Australia (GIA), under the Hort Innovation levy funded National Nursery Industry Biosecurity Program, manages the industry's pesticide minor use program (off-label) with more than 15 new actives introduced into nursery production over the past 3 years.

Recently, growers have been invited to provide feedback to reviews on current pesticide/chemical use in horticulture industries? What is driving this?

Australia applies a risk-based approach when assessing farm chemicals. The risk assessment methodologies, now employed by the regulatory authorities have progressed, so the purpose of the reviews is to ensure approved uses meet those contemporary health and environmental standards. As most of the chemicals under review were last assessed some time ago, it has been seen as prudent that they be re-evaluated. To try and ensure their risk assessments are based on current practices the APVMA seeks input on specific work practices, that is, how do growers use the pesticide?

Some chemicals could be lost to the industry? What are the implications for growers?

I would expect that the implications could be significant, should the outcome of a chemical review be the cancellation of a use, particularly if it involves something that is widely used. Where cancellation is recommended, industry would need to consider whether an alternative is needed, engage with registrants and the APVMA, particularly if access via an APVMA permit is the best pathway in the first instance.

What should industry and *growers* be doing moving forward to ensure access is maintained to agrichemicals?

I believe the thinking around pest management going forward needs to be strategic and growers need to operate under a more knowledge based system, such as Integrated Pest Management (IPM), to ensure they protect the products they currently have and avoid pesticide overuse and resistance. To be effective this will need stakeholders to be well informed and growers need to change certain pest management practices. To achieve this, it is going to require industry engagement with new systems as well as the pesticide

registrants and the regulator regarding specific chemicals, and the government where policy initiatives are being considered.

What are the challenges of maintaining or retaining access to chemicals/pesticides?

The challenge for industries will be to recognise that loss of, or restricted access too many older production nursery chemicals under reconsideration is a possibility and that they need to be strategic when considering pest management options and their availability in the long-term. For example, for industry to try and satisfy regulatory requirements for an old production nursery chemical could be prohibitively expensive with no guarantee of a positive outcome, whereas pursuing a newer technology or pest management system may be a more effective approach from a long-term perspective.

A13. Report on the 51st Session of Codex Committee on Pesticide Residues **April 2020**
Summary

The 51st Session of the Codex Committee on Pesticide Residues (CCPR) was held in Macau (SAR) China, from 8 to 13 April 2019. More than 250 delegates representing 46 Member Countries, 1 Member organization (EU) and 11 International Organizations attended the meeting including CropLife (International and Asia) and IUPAC[1].

There were over 326 maximum residue level proposals moved to Step 5/8 for adoption by the Commission (see Attachment 1). The Committee also proposed the revocation of 126 Codex MRLs due to replacement with group MRLs or where no supporting residue data was submitted.

Issues and Outcomes

A number of issues of potential interest to Australian horticulture were discussed. These included the following:

The review of the IESTI equation

The discussion over the possible revision of the international estimate of short-term dietary exposure (IEST) equation[2] continues. Most recently a draft WHO/FAO report on Acute Probabilistic Dietary Exposure Assessment for Pesticides was published. The report looked at the IESTI equations currently used by the JMPR to estimate acute dietary intakes of pesticides and concluded that they were sufficiently protective for consumers. The electronic working group was re-established to prepare a discussion paper for 52nd CCPR which will review the advantages and challenges that arise from the current IESTI equations and their impact on risk management, risk communication, consumer protection goals and trade, taking the findings from the WHO/FAO report into account.

New proposal on Bio-pesticides

Chile will lead a working group to develop Codex Guidelines for bio-pesticides. The aim is to have Guidelines that will encourage harmonisation of relevant national regulations and thereby hopefully avert the risk of trade disruptions by covering aspects such as: definitions, classification, a list of compounds that are considered to be exempted from MRLs or that do not give rise to residues, etc.

Endocrine disrupting chemicals

India again proposed that CCPR initiate work on developing guidelines on the assessment of endocrine disrupting (ED) chemicals Their proposal was again unsuccessful.

---

[1] The International Union of Pure and Applied Chemistry

[2] The EU has been instrumental in CCPR revisiting the equations used to estimate short-term dietary exposure (IESTI). Currently, the international approach is to use the highest residue found from supervised residue trials in the estimation of dietary exposure. The EU is seeking to have this changed where the proposed MRL would be used.

JMPR International collaboration

The Canadian government have progressed their initiative with CCPR agreeing that a pilot parallel review of a new compound would be desirable to explore the feasibility of such an approach. At this point Agri-Food Canada is seeking to engage a consultant to develop draft principles and procedures to facilitate the participation of the JMPR in parallel reviews of a new compound.

National Registration Database

The CCPR supported the continued development of a national registration database (NRD) to provide information on the registered uses for pesticides in member countries.

The Committee agreed on a new format for the database and the information it should contain. It is intended that about 20 pesticides will be added to the database each year for the next three years, at which point the project will be evaluated.

The work will be conducted under the control of an EWG. The relevance of the NRD will depend on which option is ultimately chosen by CCPR for the management of unsupported compounds without public health concerns.

Management of Unsupported Compounds

The CCPR could not reach a consensus on how to best manage unsupported compounds without public health concerns. While two options were most favoured agreement could not be reached. As a result an EWG was established tasked with exploring the advantages and challenges that arise from the preferred options and reporting there deliberation to CCPR 52.

The two options most favoured were as follows:

Option 2a.

All Codex MRLs will be retained if there is a single registered use listed in the CCPR National Registration Database (NRD)

Option 2b.

Only those Codex MRLs for which there are registrations listed in the NRD will be retained.

Revision of the classification of food and feed – primary commodities of plant origin

The revision of the classification of food and feed continues, with work progressing on Primary Feed Commodities, processed food commodities, miscellaneous commodities and primary food commodities of animal origin. The latter revision stalled on an inability of CCPR to agree on terminology, i.e., the use of meat or muscle and a definition for edible offal.

Establishment of the priority lists for the evaluation of JMPR in 2019

The CCPR also agreed to the priority list of pesticides to be evaluated by the JMPR meeting in (September) 2020 (See Attachments 2 and 3).

Attachment 1 Codex MRLs adopted at CCPR 51

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
Abamectin (177)	Blackberries	W	0.05
	Cane berries, subgroup of (includes all commodities in this subgroup)	0.2	
	Chives, dried	0.08	
	Dried grape (=currants, raisins and sultanas)	0.1	0.03
	Grape juice	0.05	0.015
	Grapes	0.03	0.01
	Green onions, subgroup of (includes all commodities in this subgroup)	0.01	
	Herbs, subgroup of, (includes all commodities in this subgroup)	0.015	
	Leek	W	0.005
	Orange oil	0.1	
	Pineapple	0.002*	
	Raspberries, Red, Black	W	0.05
	Soya bean (dry)	0.002*	
	Succulent beans without pods, subgroup of (includes all commodities in this subgroup)	0.002*	
	Sweet corns, subgroup of (includes all commodities in this subgroup)	0.002*	
Bentazone (172)	Beans (dry)	W	0.04
	Dry beans, subgroup of (includes all commodities in this subgroup)	0.5	
	Dry peas, subgroup of (includes all commodities in this subgroup)	0.5	
	Edible offal (Mammalian)	0.04	
	Mammalian fats (except milk fats)	0.01*	
	Meat (from mammals other than marine mammals)	0.01*	
	Milks	0.01*	
	Soya bean	W	0.01*
Benzovindiflupyr (261)	Beans (dry)	W	0.15
	Dry beans, subgroup of, except soya bean, dry	0.15	
	Dry peas, subgroup of (includes all commodities in this subgroup)	0.2	
	Peas (dry)	W	0.2

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
Chlorfenapyr (254)	Chili pepper, dry	3	
	Edible offal (Mammalian)	0.05	
	Eggs	0.01	
	Garlic	0.01*	
	Lemons and Limes, subgroup of (includes all commodities in this subgroup)	0.8	
	Mammalian fats	0.6	
	Meat (from mammals other than marine mammals)	0.6 (fat)	
	Melons, except Watermelon	0.4	
	Milks	0.03	
	Onion, bulb	0.01*	
	Oranges, Sweet, Sour, subgroup of (includes all commodities in this subgroup)	1.5	
	Papaya	0.3	
	Peppers	0.3	
	Poultry, edible offal of	0.01	
	Poultry, fats	0.02	
	Poultry, meat	0.02 (fat)	
	Potato	0.01*	
	Soya bean (dry)	0.08	
	Soya bean fodder	7 (DM)	
	Soya bean, crude oil	0.4	
	Tomatoes	0.4	
	Tea, Green, Black (black, fermented and dried)	60	
Cyantraniliprole (263)	Cranberries	0.08	
	Fruiting vegetables, Cucurbits	W	0.3
	Fruiting vegetables, Cucurbits, Group of (includes all commodities in this group)	0.3	
	Mango	0.7	
	Rice, Husked	0.01*	
	Rice, polished	0.01*	
	Rice straw & fodder (dry)	1.7 (dw)	
	Strawberry	1.5	
	Wine-grapes	1	
Cyazofamid (281)	Bulb onions, Subgroup of (includes all commodities in this subgroup)	1.5	
	Green onions, Subgroup of (includes all commodities in this subgroup)	6	
Cyprodinil (207)	Pomegranate	5 Po	10 Po

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
Diquat (031)	Barley	5	
	Barley straw and fodder, dry	40 (dw)	
	Beans, dry	W	0.2
	Chick-pea (dry)	0.9	
	Dry beans, Subgroup of (includes all commodities in this subgroup)	0.4	
	Dry peas, Subgroup of (except chick-pea (dry))	0.9	
	Mammalian fats (except milk fats)	0.01*	
	Peas (dry)	W	0.3
	Poultry fats	0.01*	
	Rye	1.5	
	Rye straw and fodder, dry	40 (dw)	
	Soya bean (dry)	W	0.3
	Soya bean hulls	1.5	
	Triticale	1.5	
	Triticale straw and fodder, dry	40 (dw)	
Ethiprole (304)*	Coffee beans	0.07	
	Coffee beans, roasted	0.2	
	Edible offal (mammalian)	0.1	
	Eggs	0.05	
	Mammalian fats (except milk fats)	0.15	
	Meat (from mammals other than marine mammals)	0.15 (fat)	
	Milk fats	0.5	
	Milks	0.015	
	Poultry meat	0.05 (fat)	
	Poultry, edible offal of	0.05	
	Poultry fats	0.05	
	Rice	3	
	Rice, husked	1.5	
	Rice, polished	0.4	
Fenpicoxamid (305)*	Banana	0.15	
Fenpyroximate (193)	Cherry tomato	W	0.3
	Edible offal (mammalian)	0.5	0.5
	Mammalian fats (except milk fats)	0.1	0.1
	Meat (from mammals other than marine mammals)	0.1 (fat)	0.1
	Milks	0.01	0.01*
	Tomato	W	0.3
	Tomatoes, subgroup of (includes all commodities in this subgroup)	0.3	

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
Fludioxonil (211)	Avocado	1.5	0.4
	Blueberries	2	2
	Bulb onions, Subgroup of (includes all commodities in this subgroup)	0.5	
	Cabbages, head	0.7	0.7
	Carrot	1	0.7
	Celery	15	
	Chick-pea (dry)	0.3	
	Currants	3	
	Edible offal (Mammalian)	0.1	0.05 *
	Eggs	0.02	0.01 *
	Green onion, Subgroup of (includes all commodities in this subgroup)	0.8	
	Guava	0.5	
	Leaves of Brassicaceae, subgroup of (includes all commodities in this subgroup)	15	
	Lentils	0.3	
	Mammalian fats (except milk fats)	0.02	
	Meat (from mammals other than marine mammals)	0.02 (fat)	0.01
	Milks	0.04	0.01
	Mustard greens	W	10
	Onion, bulb	W	0.5
	Pineapple	5 Po	
	Pomegranate	3 Po	2
	Poultry fats	0.01*	
	Poultry meat	0.01*	0.01 *
	Poultry, edible offal of	0.1	0.05
	Soya bean (dry)	0.2	
Fluopyram (243)	Cherry tomato	W	0.4
	Rice, husked	1.5	
	Rice, polished	0.5	
	Tomato	W	0.5
	Tomatoes, subgroup of (includes all commodities in this subgroup)	0.5	
Fluxapyroxad (256)	Alfalfa hay	20 (DM)	
	Citrus fruit, Group of (includes all commodities in this group)	1	
	Citrus oil, edible	60	
	Coffee beans	0.15	
	Cotton seed	0.5	0.3
	Mango	0.6	
	Oranges, Sweet, Sour (including Orange-like hybrids)	W	0.3
	Papaya	1	
	Potato	0.07	0.03
	Tuberous and corm vegetables, except potato, Subgroup of (includes all commodities in this subgroup)	0.03	

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
Imazalil (1108)**	Banana	3 Po	2 Po
	Barley	0.01*	
	Barley straw and fodder (dry)	0.01	
	Citrus Fruit	W	5 Po
	Cucumber	W	0.5
	Edible offal (mammalian)	0.3	
	Eggs	0.01*	
	Gherkins	W	0.5
	Lemons and limes, Subgroup of (includes all commodities in this subgroup)	15 Po	
	Mammalian fats (except milk fats)	0.02	
	Meat (from mammals other than marine mammals)	0.02*	
	Melons, except Watermelon	W	2 Po
	Milks	0.02*	
	Oranges, sweet, sour, Subgroup of (includes all commodities in this subgroup)	8 Po	
	Persimmon, Japanese	W	2 Po
	Pome fruits	W	5 Po
	Potato	9 Po	5 Po
	Poultry, edible offal of	0.02*	
	Poultry fats	0.02*	
	Poultry meat	0.02*	
	Raspberries, red and black	W	2
	Strawberry	W	2
	Tomato	0.3	
	Triticale	0.01*	
	Triticale straw and fodder (dry)	0.01	
	Wheat straw and fodder (dry)	0.01	0.1
Isofetamid (290)	Beans with pods, subgroup of (includes all commodities in this subgroup)	0.6	
	Bush berries, subgroup of (includes all commodities in this subgroup)	5	
	Cane berries, subgroup of (includes all commodities in this subgroup)	3	
	Cherries, subgroup of (includes all commodities in this subgroup)	4	
	Dry beans, subgroup of (except soya bean (dry))	0.05	
	Dry peas, subgroup of (includes all commodities in this subgroup)	0.05	
	Peaches, subgroup of (including Nectarine and Apricots)(includes all commodities in this subgroup)	3	
	Peas with pods, subgroup of (includes all commodities in this subgroup)	0.6	
	Plums, subgroup of (including fresh Prunes) (includes all commodities in this subgroup)	0.8	
	Pome fruits, group of (includes all commodities in this group)	0.6	

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
	Prunes, dried	3	
Kresoxim-methyl (199)**	Barley	W	0.1
	Barley, subgroup of (includes all commodities in this subgroup)	0.15	
	Beet root	0.05*	
	Cucumber	W	0.05
	Currant	0.9	
	Dried grapes (=currants, raisins and sultanas)	3	2
	Edible offal (Mammalian)	0.05	0,05*
	Eggs	0.02*	
	Fruiting vegetables, Cucurbits, Group of (includes all commodities in this group)	0.5	
	Garlic	0.01	
	Grape	1.5	1
	Grapefruit	W	0.5
	Leek	10	
	Mammalian fats (except milk fats)	0.02*	0.05*
	Mango	0.1	
	Meat (from mammals other than marine mammals)	0.02*	0.05*
	Milks	0.02*	0.01*
	Olive oil, Virgin	1	
	Olives for oil production	0.2	
	Fruiting vegetables, Cucurbits, Group of (includes all commodities in this group)	0.5	
	Peach	1.5	
	Pecan nuts	0.05*	
	Peppers, sweet	0.3	
	Pome fruits	W	0.2
	Poultry fats	0.02*	
	Poultry meat	0.02*	0.05*
	Poultry, Edible offal of	0.02*	
	Straw and fodder (dry) of cereal grains	3 (DM)	5
	Sugar beet	0.05*	
	Table olives	0.2	
	Turnip	0.05*	
	Wheat	W	0.05*
	Wheat, subgroup of (includes all commodities in this subgroup)	0.05	
Lufenuron (286)	Coffee beans	0.07	
	Edible offal (Mammalian)	0.15	0.04
	Lime	0.4	
	Mammalian fats	2	0.7
	Meat (mammalian except marine	2 (fat)	0.7

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
	mammals)		
	Maize	0.01	
	Milks	0.15	0.1
	Milk fats	5	2
	Oranges sweet, sour, Subgroup of (includes all commodities in this subgroup)	0.3	
	Orange oil, edible	8	
	Pome fruits, Group of (includes all commodities in this group)	1	
Mandipropamid (231)	Beans with pods, subgroup of (includes all commodities in this subgroup)	1	
	Cacao bean	0.06	
	Edible offal (mammalian)	0.01*	
	Eggs	0.01*	
	Mammalian fats (except milk fats)	0.01*	
	Meat (from mammals other than marine mammals)	0.01*	
	Milks	0.01*	
	Potato	0.1	0.01*
	Poultry edible offal	0.01*	
	Poultry fats	0.01*	
	Poultry meat	0.01*	
Norflurazon (308)*	Alfalfa fodder	7 (DW)	
	Edible offal (Mammalian)	0.3	
	Eggs	0.02 *	
	Mammalian fats (except milk fats)	0.02 *	
	Meat (from mammals other than marine mammals)	0.02 *	
	Milks	0.02 *	
	Poultry fat	0.02 *	
	Poultry meat	0.02 *	
	Poultry, Edible offal of	0.02 *	
Oxathiapiprolin (291)	Basil (fresh)	10	
	Basil, dry	80	
	Cane berries, Subgroup of (includes all commodities in this subgroup)	0.5	
	Citrus fruit, Group of (includes all commodities in this group)	0.05	
	Citrus oil, edible	3	
	Citrus pulp, dry	0.15	
	Edible offal (mammalian)	W	0.01*
	Eggs	0.01*	0.01*
	Leaves of Brassicaceae, Subgroup of (includes all commodities in this subgroup)	10	

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
	Maize	0.01*	
	Maize fodder	0.01*	
	Mammalian fats (except milk fats)	W	0.01*
	Meat (from mammals other than marine mammals)	W	0.01*
	Milks	W	0.01*
	Poppy seed	0.01*	
	Potato	W	0.01*
	Poultry edible offal	0.01*	0.01*
	Poultry fats	0.01*	0.01*
	Poultry meats	0.01*	0.01*
	Soya bean (dry)	0.01*	
	Soya bean hay	0.02	
	Sunflower seed	0.01*	
	Sweet potato	W	0.01*
	Tuberous and corm vegetables, Subgroup of (includes all commodities in this subgroup)	0.04	
	Young shoots, Subgroup of (includes all commodities in this subgroup)	2	
Profenofos (171)	Coffee bean	0.04	-
Propamocarb (148)	Edible offal (Mammalian)	1.5	0.01*
	Mammalian fats (except milk fats)	0.03	-
	Meat from mammals (other than marine mammals)	0.03	0.01*
	Milks	0.01*	0.01*
Propiconazole (160)	Cherries, Subgroup of (including all commodities in this subgroup)	3 Po	3 Po
	Lemons and Limes (including Citron)	10 Po	15 Po
	Subgroup of (including all commodities in this subgroup)		
	Mandarins (including Mandarin-like hybrids) Subgroup of (including all commodities in this subgroup)	10 Po	15 Po
	Orange oil	1850	2800
	Oranges, Sweet, Sour (including orange-like hybrids) Subgroup of (including all commodities in this subgroup)	10 Po	15 Po
	Peach	0.7 Po	1.5 Po
	Pineapple	2 Po	4 Po

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
	Plums, Subgroup of (includes all commodities in this subgroup)	0.4 Po	0.5 Po
	Pumelo and grapefruit (including Shaddock-like hybrids)Subgroup of (including all commodities in this subgroup)	4 Po	6 Po
Pydiflumetofen (309)*	Dried grapes (= Currants, Raisins and Sultanas)	4	-
	Small fruit vine climbing, Subgroup of (includes all commodities in this subgroup)	1.5	-
Pyraclostrobin (210)	Apple	W	0.5
	Asparagus	0.01*	-
	Avocado	0.2	-
	Beans with pods, subgroup of, except common bean	0.3	-
	Broad bean, without pods (succulent seeds)	0.01	-
	Cacao beans	0.01	-
	Carrot	W	0.5
	Celery	1.5	-
	Common bean	0.6	-
	Common beans (succulent seeds)	0.3	-
	Dry peas, Subgroup of (includes all commodities in this subgroup)	0.3	-
	Edible offal (Mammalian)	0.05	0.05*
	Lettuce, head	40	2
	Mammalian fats (except milk fats)	0.5	-
	Meat (from mammals other than marine mammals)	0.5 (fat)	0.5 (fat)
	Mango	0.6	0.05*
	Milks	0.03	0.03
	Olives for oil production	0.01	-
	Olive oil, Virgin	0.07	-
	Peas with pods, Subgroup of	0.3	-
	Peas (pods and succulent=immature seeds)	W	0.02*
	Passion fruit	0.2	-
	Pineapple	0.3	-
	Pome fruits (includes all commodities in this group)	0.7	-
	Potato	W	0.02*
	Radish	W	0.5
	Rice	1.5	-
	Rice, Husked	0.09	-
	Rice, Polished	0.03	-
	Rice straw and fodder, dry	5 (dw)	-
	Root vegetables, Subgroup of (includes all commodities in this subgroup)	0.5	-
	Spinach	1.5	-

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
	Succulent peas without pods, Subgroup of (includes all commodities in this subgroup)	0.08	-
	Sugar cane	0.08	-
	Table olives	0.01	-
	Tea, Green, Black (black, fermented and dried)	6	-
	Tuberous and corm vegetables, subgroup of (includes all commodities in this subgroup)	0.02*	-
	Witloof chicory (leaves/sprouts)	0.09	-
Pyriofenone (310)*	Cane berries, Subgroup of (includes all commodities in this subgroup)	0.9	
	Bush berries, Subgroup of (includes all commodities in this subgroup)	1.5	
	Dried grapes (=Currants, Raisins and Sultanas)	2.5	
	Fruiting vegetables, Cucurbits, Group of (includes all commodities in this group)	0.2	
	Low growing berries, Subgroup of (includes all commodities in this subgroup)	0.5	
	Small fruit vine climbing, Subgroup of (includes all commodities in this subgroup)	0.8	
Pyriproxyfen (200)	Cucumbers	0.04	
	Eggplant	0.6	
	Gherkins	0.04	
	Melons, except Watermelon	0.07	
	Papaya	0.3	
	Peppers	0.6	
	Peppers chili, dried	6	
	Pineapple	0.01	
	Summer squash	0.04	
	Tomato	0.4	
Sulfoxaflor (252)	Edible offal (Mammalian)	1	0.6
	Maize	0.01*	
	Maize fodder (dry)	0.6	-
	Mammalian fats	0.2	0.1
	Meat (mammalian except marine mammals)	0.4	0.3
	Milks	0.3	0.2
	Poultry meat	0.7	0.1
	Rice	7	
	Rice, polished	1	
	Rice, husked	1.5	
	Rice straw and fodder (dry)	20	-
	Sorghum	0.2	
	Sorghum straw and fodder (dry)	0.7	-
	Sweet corn (corn-on-the-cob) (kernels	0.01*	

Pesticide (Codex reference number)	Commodity	Recommended Maximum residue level (mg/kg)	
		New	Previous
	plus cobs with husks removed) Tree nuts, Group of (includes all commodities in this group)	0.03	-
Tioxazafen (311)*	Cotton gin trash Cottonseed Edible offal (mammalian) Eggs Maize Maize fodder Mammalian fats (except milk fats) Meat (from mammals other than marine mammals) Milks Poultry edible offal Poultry fat Poultry meat Soya bean (dry) Soya bean fodder Soya bean meal	0.02 0.01* 0.03 0.02* 0.01* 0.03 (DM) 0.03 0.02 0.02 0.02* 0.02* 0.02* 0.04 0.4(DM) 0.06	

Attachment 2 Compounds listed for evaluation by the JMPR in 2020

New compounds

Compound	Commodities	Nominator
Ethalfluralin	Pulses	Gowan / Canada
Pyraziflumid	Apple; Pear	Bayer AG / Canada
BCS-CN88460 (Isoflucypram)	wheat grain, triticale grain, barley grain, rye grain, oats grain, corn/maize grain, sweet corn, cereals straw, by-products of cereals and corn/maize, as well as products of animal origin	Nihon Nohyaku / Japan
Broflanilide	USA- Brassica vegetables; Fruiting vegetables; Leafy vegetables; Legume vegetables; Pulses; Root vegetables	Bayer CropScience / Germany
BAS 750 F (mefentriflucona zole)	USA- wheat, field corn, rice, sorghum, barley, sweet corn, dried beans, succulent beans, dried peas, succulent peas, lentils, soybean, sugar beet, peanut, canola, apple, pear, almond, pecan, pistachio, cherry, peach, plum, grape	Landis International on behalf of Mitsui Chemicals / USA
Tetraniliprole	Tuberous and corm vegetables; Leafy vegetables; Brassica vegetables; Fruiting vegetables; Citrus fruit, Pome fruit, Stone fruit, Grape, Soybean, Maize, popcorn and sweet corn, Cotton, Tree nuts, Rice	BASF / USA
Inpyrfluxam	Apple; Corn; Peanut; Rice; Soybean; Sugarbeet	Bayer AG CropScience

Compound	Commodities	Nominator
		Division / Germany
BCS-CS55621 (Fluoxapiprolin)	Potatoes, Tomato, Onion	Sumitomo Chemical / Japan
Pyrasulfutole	wheat, barley, oat, sorghum	Bayer AG / Germany

New uses

Compound	Commodities	Nominator
Trinexapac	RICE, RYE	Syngenta
Isoxaflutole (268)	SOYA BEAN (LABEL REVIEW)	Bayer CropScience
Tebuconazole (189)	COFFEE	Bayer AG
Trifloxystrobin (213)	TREE NUTS, CITRUS FRUITS, FLAX, COFFEE, LEGUME VEGETABLES, PULSES, LETTUCE, BERRIES AND OTHER SMALL FRUITS, COFFEE	Bayer AG
Prothioconazole (232)	RAPESEED, FLAX, SUNFLOWER	Bayer AG
Flupyradifurone (285)	ASPARAGUS, SUNFLOWER, SWEET SORGHUM, PINEAPPLE, SESAME, DATE	Bayer AG
Fluopyram (243)	MELON, PINEAPPLE, PAPAYA, COFFEE	Bayer AG
Bixafen (262)	PEANUT, CORN, SORGHUM, SOYBEAN, COTTON, SUNFLOWER, RAPESEED, WHEAT, BARLEY, SUGARBEET, CARROT, RADISH, POTATOES	Bayer AG
Isoprothiolane	BANANA	Costa Rica, Ecuador and Guatemala / Nihon Nohyaku
Pyraclostrobin (210)	Ginseng (Rep of Korea)	Rep of Korea / BASF
Thiamethoxam (245)	Ginseng (Rep of Korea) Syngenta: Wheat, barley, sweet corn, sorghum	Rep of Korea / Syngenta
Fluensulfone (265)	Corn, Guava, Cotton	Adama
Clofentezine (156)	Hops (IR4)	Adama
Chlorothalonil (81)	orange; lemon; grapefruit; lettuce; strawberry; almond; radish (root veg); mustard greens; guava; lychee,	Syngenta
Spiromesifen (294)	Orange	Bayer AG
Pydiflumetofen	Citrus, sugarbeet, carrot, radish, brassica, mustard green, legumes, pulses, onion, sunflower, tree nuts, pome fruit, cotton, sorghum, strawberry, blueberry, stone fruit	Canada / Syngenta
Metalaxyl-M	Raspberry, lettuce, maize/corn, peppercorn	Syngenta
Indoxacarb (216)	almond, pecan, pistachio	FMC
Fenpyroximate (193)	Citrus; Banana; Celery; Caneberry; Summer squash; Watermelon, Bean (succulent shelled), blueberry	USA / Nihon Nohyaku Co., Ltd
Fenpicoxamid - XDE-777 (999)	Wheat, triticale, rye and durum	UK / France / Corteva
Afidopyropen	Grasses, forage and hay; Clover; Alfalfa;	BASF

Compound	Commodities	Nominator
	Sorghum	
Sulfoxaflor (252)	Kenya, Tanzania, Uganda, Ghana, Senegal: mango; Vietnam - coffee; USA - asparagus, artichoke, blueberry, caneberry, sunflower.	USA / Corteva
Acephate (95)	Rice, grapes, fresh vegetables (cabbage, cauliflower, okra, green chilli, green pea, bitter gourd, cucumber, brinjal and capsicum) / Curry leaves, Dry chilli, Cumin, Fennel, fenugreek, dry ginger	India
Bifenthrin (178)	Rice, fresh vegetables (cabbage, cauliflower, okra, green chilli, grean pea, bitter gourd, cucumber, brinjal and capsicum), grapes, tea, / Curry leaves	India
Carbendazim (72)	Dried ginger, dried chilli, cumin	India
Chlorpyrifos (017)	fresh vegetables (cabbage, cauliflower, okra, green chilli, green pea, bitter gourd, cucumber, brinjal and capsicum), rice, grapes / Curry leaves, Dry chilli, Cumin, Fennel, fenugreek, dry ginger	India
Chlorfenapyr (254)	Dried chilli	India
Clothianidin (238)	Cumin	India
Cypermethrin (118)	Curry leaves, Dry chilli,	India
Deltamethrin (35)	Dried chilli	India
Diazinon (22)	Rice, fresh vegetables (cabbage, cauliflower, okra, green chilli, grean pea, bitter gourd, cucumber, brinjal and capsicum), grapes	India
Dicofol (26)	Black pepper, fennel, fenugreek	India
Dimethoate (27)	Rice, fresh vegetables (cabbage, cauliflower, okra, green chilli, green pea, bitter gourd, cucumber, brinjal and capsicum), grapes, Tea	India
Fenpropathrin (185)	Dried chilli, cumin	India
Metalaxyl (138)	Dried ginger	India
Methomyl (94)	Rice, fresh vegetables (cabbage, cauliflower, okra, green chilli, green pea, bitter gourd, cucumber, brinjal and capsicum), grapes	India
Parathion (59)	Curry leaves	India
Phosalone (60)	Cardamom, dried chilli	India
Phorate (112)	Dried ginger, cumin	India
Profenofos (171)	fresh vegetables (cabbage, cauliflower, okra, green chilli, green pea, bitter gourd, cucumber, brinjal and capsicum),Tea, / curry leaves, dried chilli, cumin, cardamom, fennel, fenugreek, black pepper, ginger powder	India
Propiconazole (160)	Fennel, fenugreek	India
Triazophos (143)	Rice, fresh vegetables (cabbage, cauliflower, okra, green chilli, green pea, bitter gourd, cucumber, brinjal and capsicum), grapes / Curry leaves, Dry chilli, Cumin, Fennel, fenugreek, dry ginger	India
Spiromesifen (294)	Rice, fresh vegetables (cabbage, cauliflower, okra, green chilli, grean pea, bitter gourd, cucumber, brinjal and capsicum), grapes, tea	India
Lambda-	Rice, fresh vegetables (cabbage,	India

Compound	Commodities	Nominator
cyhalothrin (146)	cauliflower, okra, green chilli, green pea, bitter gourd, cucumber, brinjal and capsicum), grapes, Tea, cumin	

A14. OH&S Application Scenario Summary- Draft Vegetable row crop spraying

Crop group/crop:	Vegetable crops	Pest group/pest	Mites/insects
Growing type	Field – row crops	Field or Protected	Field use
Region/country/local area :	Sydney basin	Crop growth stage:	10-77
Application type	Insecticide	Date:	

Use Pattern:

Application	appl. method :	High volume
	equipment type :	Tractor mounted
	equipment :	Ground boom – spray boom
	treatment zone :	overall
	water volume (L/ha) :	1000
	nozzle type :	Hollow cone
	nozzle size :	1-3 L/min
	nozzle spacing :	50 cm
	pressure :	1-3 bar
	tank capacity (L) :	2000

Operator safety	no. of operators :	one mixer/loader/applicator
	cabin :	Yes and no
	PPE during mix/loading :	Elbow-length PVC gloves, shirt (long sleeved), trousers, face shield and boots
	PPE during application :	yes
	treated area (ha/day) :	Maximum – 10 ha
	Work rate (hours/day) :	4
	no. of operations/d for M/L:	5

Product	formulation type :	EC
	packaging :	1 L
Re-entry activity	type of activity :	scouting
	date (days after appl.) :	2-3
	duration (hours/day) :	1
	crop height :	< 1m
	foliage :	low
	remarks:	The activity is based on a proposed use pattern of flowering-early fruit set. For later application timings then thinning would need to be considered.

The maximum expected work rate in a row crop is anticipated to be of the order of 10 ha per day depending upon farm layout and spraying technology applied.

The following examples illustrate how this figure was derived. In row crops the spray tank capacity is most commonly 2,000 Litres. Tractor travel speed, depending upon terrain would generally be in the range of 2.5-4.0 km/h. An average row spacing of 1 m with an 8 m boom length would translate to approximately 1.25 km of travel per hectare sprayed.

This would mean that an applicator could spray approximately 1.0 ha in 15 to 30 minutes, depending upon tractor speed. Based on a spray tank capacity of 2000 L and a spray volume of 1000 L/ha, 2 ha could be treated in 30 minutes to an hour. When mixing, loading and travel time are considered, i.e., an additional 30 minutes per tank load, it would require 1 to 1.5 hours to treat 2 ha. Therefore, a daily work rate of 8-10 ha could be expected with four mixing and loading operations.

Application Scenario Summary – Draft Deciduous fruit crop spraying

Crop group/crop:	Tree crops /Deciduous	Pest group/pest	Disease
Growing type	Field	Field	Field use
Region/country/local area :		Crop growth stage:	BBCH 71-79
Application type	Fungicide	Date:	

Use Pattern:

Application	appl. method :	High volume
	equipment type :	Tractor mounted
	equipment :	Airblast
	treatment zone :	overall
	water volume (L/ha) :	1500
	nozzle type :	Hollow cone
	nozzle size :	1-3 L/min
	nozzle spacing :	50 cm
	pressure :	1-3 bar
	tank capacity (L) :	2000

Operator safety	no. of operators :	one mixer/loader/applicator
	cabin :	Yes
	PPE during mix/loading :	Elbow-length PVC gloves, shirt (long sleeved), trousers, face shield and boots
	PPE during application :	yes
	treated area (ha/day) :	Maximum – 6-8 ha
	Work rate (hours/day) :	6
	no. of operations/d for M/L:	4-5

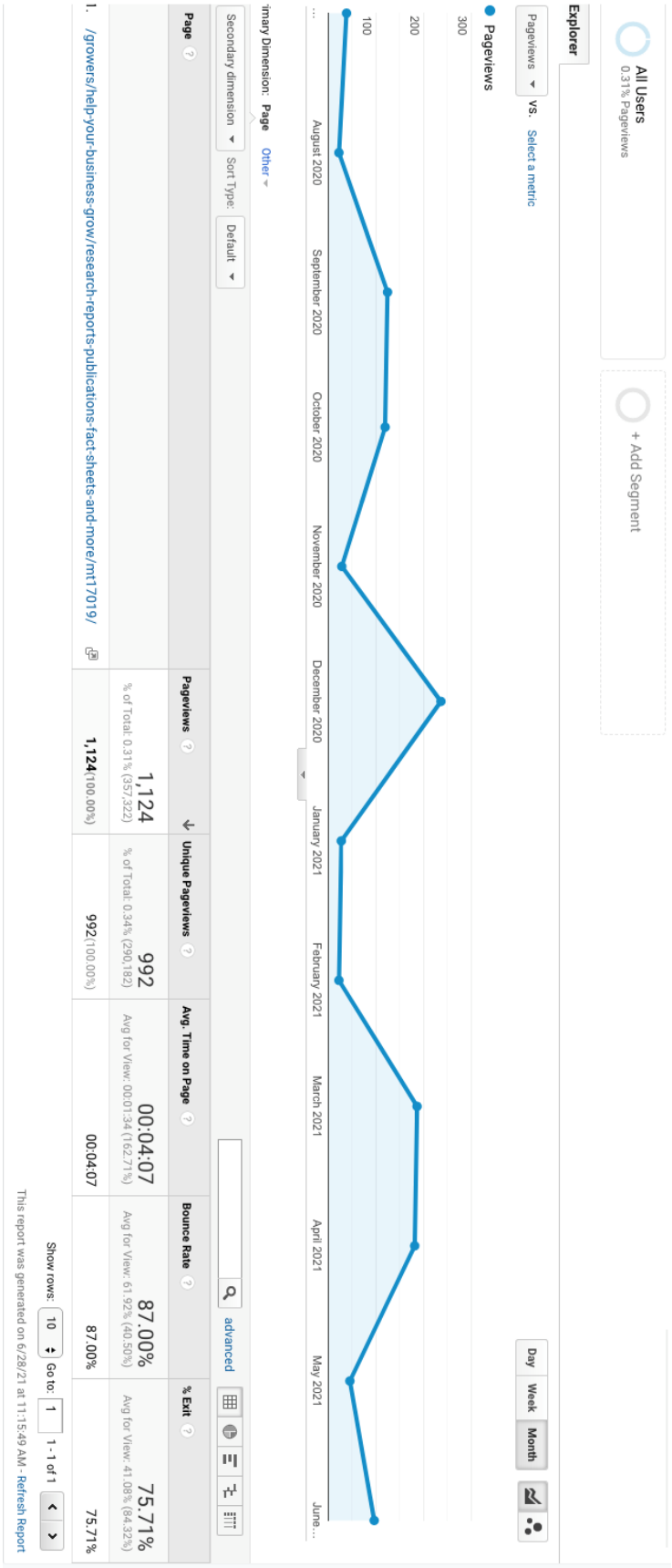
Product	formulation type :	EC
	packaging :	1 L
Re-entry activity	type of activity :	scouting
	date (days after appl.) :	2-3
	duration (hours/day) :	1
	crop height :	< 1m
	foliage :	low
	remarks:	The activity is based on a proposed use pattern of post flowering through fruit set.

A15. Outline of project engagement activities

25-26/07/2018 APVMA General
22/8/2018 - Syngenta Sydney
22/8/2018 - Corteva Sydney
23/8/2019 - FMC Sydney
1/10/2018 - Syngenta Sydney
12/10/2018 GMUS Telecon
16-17/10/2018 ACAP Melbourne
10/12/2018 - CCPR Panel Mtg Canberra
11/12/2018 DAWE Grants Canberra
13/12/2018 APVMA - Canberra
25/10/2018 PHA Leafminer Telecon
5/02/2019 APVMA Canberra
14/2/2019 - CCPR panel Mtg Canberra
14/02/2019 APVMA Canberra
15/2/2019 NWPPA - Canberra
6-7/3/2019 Citrus Technical Forum Adelaide
25/03/2019 APVMA Canberra
25/3/2019 CCPR Panel Mtg Canberra
25/03/2019 APVMA Canberra
8-13/4/2019 CCPR Mtg China
1/5/2019 CCPR Panel Mtg Canberra
3/6/2019 - BASF Melbourne
12-13/6/2019 ACAP Melbourne
24-26/6/2019 - Hort Connect Melbourne
2/7/2019 Mushrooms Strategic review North Sydney
17/07/2019 APVMA Canberra
12/8/2019 - APVMA Chlorpyrifos Telecon
28/10/2019 APVMA Canberra
29-30/10/2019 DAWE Grants Canberra
3/12/2019 GMUS Telecon
10/12/2019 - APVMA Chlorpyrifos Telecon
21-22/1/2020 APAL Post-harvest Mtg Shepparton
12/2/2020 - FMC Sydney
20/2/2020 - AMIA Brisbane
20/2/2020 ABGC Brisbane
20/2/2020 AGA Brisbane
5/03/2020 - CCPR Panel Mtg Canberra
18/5/2020 APVMA Chlorpyrifos Virtual
25/5/2020 - DAWE Agvet Chem Review Virtual
4/6/2020 GMUS Telecon
10/6/2020 AMIA - Chlorpyrifos Telecon
14/7/2020 GMUS Telecon
17/9/2020 APVMA Work rates Virtual
23/9/2020 GMUS Webinar
30/9/2020 AMIA Chemical update webinar
16/11/2020 DAWE Grants Virtual
1/12/2020 ABA Sustainable chemical use webinar
14/12/2020 APAL Telecon - MRLs

29/1/2021 Ausveg ChlorpyrifosTelecon
5/2/2021 - DAWE Agvet Chem review Virtual
18/3/2021 - Nufarm Melbourne
19/3/2021 - Bayer Melbourne
24/3/2021 - BASF Telecon
22/4/2021 CCCF panel Mtg Virtual
22/4/2021 Cherry Industry webinar
4/5/2021 APVMA Canberra - Crop groupings
4/5/2021 CCPR MRL WG Canberra
6/5/2021 NFFS Webinar
8-9/6/2021 Hort Connect Brisbane
9/6/2021 - Syngenta Brisbane

A16. Project MT17019 Page views August 2020 to May 2021



A17. AgChemical consolidated Regulatory Risk Assessment June 2021

R1	**Short-term: Critical concern over retaining access**
R2	**Medium-term: Maintaining access of significant concern**
R3	**Long-term: Potential issues associated with use - Monitoring required**

Insecticides

Active Constituents	Chemical Group	Comment
Acephate	**1B**	APVMA – Nominated for review Canada –Review completed continued use acceptable with risk mitigation EU: No authorisation in place
α-cypermethrin	**3A**	EU: Proposed restricted authorisation & Candidate for substitution
Abamectin	**6**	
Acetamiprid	**4A**	APVMA: Under review
Afidopyropen	**9D**	
Azadirachtin	**UN**	EU: Authorisation renewal process underway
Azinphos-methyl	**3A**	Codex: Not supported, all but spice MRLs deleted EU: No authorisation in place USA: No registrations Registrant support uncertain
B thuringiensis	**11A**	EU: Under review
B sphaericus	**11B**	
Beta-cyfluthrin	**3A**	EU: No authorisation in place
Bifenazate	**20D**	EU: Proposed non-renewal
Bifenthrin	**3A**	Canada: Subject to phase-out until 31/12/2020 EU: No authorisation in place
Bioresmethrin	**3A**	
Buprofezin	**16**	Europe: In the process of deleting MRLs
Cadusafos	**1B**	EU: No authorisation in place
Carbaryl	**1A**	Canada: Review recently completed, retained but with a large number of uses deleted Codex: Toxicology review scheduled 2020 EU: No authorisation in place
Chlorantraniliprole	**28**	
Chlorfenapyr	**13**	EU: No authorisation in place
Chlorpyrifos	**1B**	APVMA: Under review. Potential issues w.r.t. environmental loading and worker exposure.

Active Constituents	Chemical Group	Comment
		Codex: Scheduled for review by JMPR in 2021 Canada: Cancellation of all uses. EU: No authorisation in place USA: EPA decision to allow continued use
Clofentezine	**10A**	
Clothianidin	**4A**	APVMA: Under review Canada: Proposal to cancel foliar use in orchards strawberries and turf EU: Outdoor uses deregistered USA: Re-registration with new risk mitigation measures
Cyantraniliprole	**28**	
Cyromazine	**17**	EU: No authorisation in place
Deltamethrin	**3A**	
Diafenthiuron	**12A**	Codex: No MRLs EU: No authorisation in place
Diazinon	**1B**	EU: No authorisation in place Codex: To be reviewed by 2020/21.
Dicofol	**UN**	APVMA: Nominated for review Codex: No MRLs EU: No authorisation in place Nominated for listing under the Stockholm Convention.
Dichlorvos	**1B**	EU: No authorisation in place
Diflubenzuron	**15**	EU: No authorisation in place
Dimethoate (PER13859)	**1B**	Codex: MRL deletion recommended. EU proposing to set all MRLs to < 0.01 mg/kg
Dinotefuran	**4A**	APVMA: Under review EU: No authorisation in place
Emamectin benzoate	**6**	EU: Candidate for substitution
Esfenvalerate	**3A**	EU: Candidate for substitution
Ethyl formate	**8A**	EU: No authorisation in place
Etoxazole	**10B**	EU: Only uses on greenhouse ornamentals approved & Candidate for substitution
Fenamiphos	**1B**	
Fenbutatin oxide	**12B**	APVMA: Nominated for review Codex: To be reviewed 2020/21. No supporting registrant EU: No authorisation in place
Fenitrothion	**1B**	EU: No authorisation in place
Fenoxycarb	**7B**	
Fenpyroximate	**21A**	
Fipronil	**2B**	APVMA: Under review Codex: Re-evaluation scheduled for 2021/22 EU: No authorisation in place
Flonicamid	**29**	
Flubendiamide	**28**	
Flupyradifurone	**4D**	
Helicoverpa NPV	**31**	
Hexythiazox	**10A**	Codex: No MRLs
Imidacloprid	**4A**	APVMA: Under review Canada: Under review

Active Constituents	Chemical Group	Comment
		EU: No authorisation in place USA: Re-registration with new risk mitigation measures
Indoxacarb	**22A**	EU: Proposed non-renewal
Lambda-cyhalothrin	**3**	
Maldison	**1B**	APVMA: Under review – chemistry Codex: Re-evaluation scheduled for 2022/23
Metaflumizone	**22B**	
M. anisopliae var. *acridum*	**UNF**	
Methiocarb	**1A**	EU: Proposed non-renewal
Methomyl	**1A**	APVMA: nominated for review Canada: Re-evaluation completed (2018). Majority of uses removed EU: No authorisations in place
Methoprene / S-methoprene	**7A**	EU: No authorisations in place
Methoxyfenozide	**18**	EU: Proposed restricted authorisation & Candidate for substitution
Mevinphos	**1B**	EU: No authorisations in place
Milbemectin	**6**	
Novaluron	**15**	EU: No authorisations in place
Omethoate	**1B**	Codex: No MRLs Canada: No approvals in place EU: No authorisations in place USA: No approvals in place
Oxamyl	**1A**	EU: Candidate for substitution
Paraffinic oil/ petroleum oil	**-**	
Phorate	**1B**	APVMA: Nominated for review EU: No authorisation in place
Permethrin	**3A**	Codex: Re-evaluation scheduled 2021/22. Support uncertain EU: No authorisation
Pirimicarb	**1A**	Codex: JMPR Periodic re-evaluation 2022/23 EU: Candidate for substitution
Propargite	**12C**	APVMA: nominated for review
Prothiofos	**1B**	Codex: No MRLs EU: No authorisation in place
Pymetrozine	**9B**	Codex: No registrant support EU: No authorisation in place
Pyrethrins	**3A**	
Pyridaben	**21A**	
Pyriproxyfen	**7C**	
Spinetoram	**5**	
Spinosad	**5**	
Spirotetramat	**23**	
Sulfoxaflor	**4C**	USA: Pollinator concerns
Sulfur	**UN**	
Tau-fluvalinate	**3A**	
Tebufenozide	**18**	
Tebufenpyrad	**21A**	EU: Candidate for substitution

Active Constituents	Chemical Group	Comment
Terbufos	**1B**	Codex: Tox re-evaluation scheduled 2020/21. EU: No authorisation in place
Thiacloprid	**4A**	APVMA – Under review EU: No authorisation in place
Thiamethoxam	**4A**	APVMA: Under review Canada: Proposal to deregister outdoor uses Europe: Outdoor uses deregistered USA: Re-registration with new risk mitigation measures
Thiodicarb	**1A**	EU: No authorisations
Trichlorfon (PER12439)	**1B**	APVMA: nominated for review Codex: No MRLs EU: No authorisations USA: No MRLs
Triflumuron	**15**	
Copper complex	**-**	
iron-EDTA complex	**-**	
Metaldehyde	**-**	UK: Outdoor use being phased-out by 31 March 2022
Methiocarb	**1A**	EU: No authorisations
Cyanogen (ethanedinitrile)	**-**	
Fluensulfone	**-**	EU: No authorisations

Fungicides

Active Constituents	Chemical Group	Comment
Ametoctradin	**45**	
Amisulbrom	**21**	
Azoxystrobin	**11**	
Bacillus amyloliquefaciens	**44**	
Benalaxyl	**4**	EU: No authorisation in place (benalaxyl-M approved)
Bitertanol	**3**	EU: No authorisation in place
Boscalid	**7**	
Bupirimate	**8**	
Captan	**M4**	
Carbendazim	**1**	Codex: Periodic re-evaluation in 2022/23 EU: No authorisation in place
Carboxin	**7**	
Chlorothalonil	**M5**	APVMA: Previously nominated for review Canada: Review recently completed, continued use considered acceptable EU: No authorisation in place
Copper	**M1**	
Cyazofamid	**21**	
Cyflufenamid	**U6**	

Active Constituents	Chemical Group	Comment
Cyproconazole	**3**	APVMA: Nominated for review EU: Candidate for substitution
Cyprodinil	**9**	Canada: Under review EU: Candidate for substitution
Didecyldimethylammonium chloride	**-**	EU: No authorisation in place
Difenoconazole	**3**	APVMA: Nominated for review Canada: Currently being reviewed EU: Candidate for substitution
Dimethomorph	**40**	
Dithianon	**M9**	EU: Restricted use to non-edible crops
Dodine	**U12**	
Epoxiconazole	**3**	APVMA: Nominated for review EU: No authorisation in place
Ethanedinitrile	**-**	EU: No authorisation in place
Fenbuconazole	**3**	APVMA: Nominated for review
Fenhexamid	**17**	
Fenpyrazamine	**17**	
Fluazinam	**29**	
Fludioxonil	**12**	EU: Under review, & candidate for substitution
Fluopicolide	**43**	
Fluopyram	**7**	
Fluopyram + tebuconazole	**7 + 3**	Tebuconazole APVMA: Nominated for review EU: Candidate for substitution
Fluquinconazole	**3**	EU: Candidate for substitution
Fluxapyroxad	**7**	
Guazatine	**M7**	EU: No authorisation in place
Hydrogen peroxide + peroxyacetic acid	**M**	
Imazalil	**3**	EU: Under review -data gaps identified. Withdrawal of many EU MRLs proposed.
Imazalil (citrus)	**3**	Codex: Oranges and lemon MRLs only EU: Under review -data gaps identified. EU citrus MRLs to be reviewed in 2021
Iodocarb	**28**	EU: No authorisation in place
Iprodione	**2**	EU: No authorisation in place Canada: Majority of food crop uses deleted Codex: Review scheduled for 2022/23
Isofetamid	**7**	
Isopyrazam	**7**	EU: Authorisation not renewed
Kresoxim-methyl	**7**	
Mancozeb	**M3**	APVMA: Nominated for review Canada: Many uses cancelled Codex: To be reviewed 2022/23 EU: Authorisation not renewed

Active Constituents	Chemical Group	Comment
Mandipropamid	**40**	
Mandestrobin	**11**	
Melaleuca oil	**-**	
Metalaxyl/ Metalaxyl-M	**4**	
Metiram	**M3**	APVMA: Nominated for review Canada: Proposed cancelling of foliar uses other than potato Codex: To be reviewed 2022/23
Metrafenone	**U8**	
Myclobutanil	**3**	APVMA: Nominated for review EU: Candidate for substitution
Ortho-phenylphenol		
Oxadixyl	**4**	EU: No authorisation in place
Oxathiapiprolin	**49**	
Oxycarboxin	**7**	EU: No authorisation in place
Phosphonic acid	**33**	
Penconazole	**3**	APVMA: Nominated for review
Penthiopyrad	**7**	
Prochloraz	**3**	Codex: Periodic re-evaluation scheduled for 2021/22
Procymidone	**2**	APVMA: Review in progress Codex: No MRLs EU: No authorisations
Propamocarb HCl	**28**	
Propiconazole	**3**	APVMA: Nominated for review EU: No authorisations[i]
Propineb	**M3**	APVMA - Nominated for review EU: No authorisation in place Codex: To be reviewed 2022/23
Proquinazid	**13**	
Pydiflumetofen	**7**	
Pyraclostrobin	**11**	
Pyrimethanil	**9**	
Pyriofenone	**U8**	
Quinoxyfen	**13**	EU: No authorisations
Quintozene	**14**	Codex: Periodic re-evaluation scheduled for 2021/22 EU: No authorisations
Sodium metabisulfite	**M**	
Spiroxamine	**5**	
Streptomyces lydicus	**BM2**	
Tebuconazole	**3**	APVMA: Nominated for review EU: Candidate for substitution
Thiabendazole	**1**	
Thiophanate-methyl	**1**	EU: No authorisation. Grace period expires 19/10/2021
Thiram	**M3**	APVMA: Nominated for review Canada: Proposed cancelling of all foliar uses

Active Constituents	Chemical Group	Comment
		Codex: To be reviewed 2022/23 Europe: No authorisation in place
Tolclofos-methyl	**14**	EU: Proposed restricted authorisation
Triadimefon	**3**	APVMA: Nominated for review EU: No authorisation in place
Triadimenol	**3**	APVMA: Nominated for review EU: No authorisation in place
Trichoderma harzianum	**BM2**	
Trifloxystrobin	**11**	
Triforine	**3**	APVMA: Nominated for review Canada: Review completed 2019 – use acceptable
Uniconazole-P	**3**	Canada: Use acceptable with risk mitigation EU: No authorisation in place
Zineb	**M3**	APVMA: Nominated for review Codex: To be reviewed 2022/23 EU: No authorisation in place
Ziram	**M3**	APVMA: Nominated for review Canada: Proposed cancelling of all uses Codex: To be reviewed 2022/23 EU: Candidate for substitution

Herbicides

Active Constituents	Chemical Group	Comment
2,4-D	**I**	
Ametryn	**C**	EU: No authorisation in place
Amitrole	**Q**	APVMA: Nominated for review EU: No authorisation in place
Asulam	**R**	
Atrazine	**C**	EU: No authorisations in place
Benfluralin	**D**	EU: Non-renewal proposed
Bentazone	**C**	
Bromacil	**C**	EU: No authorisation in place
Bromoxynil		EU: Non-renewal proposed
Carfentrazone-ethyl	**G**	
Chloridazon	**C**	EU: No authorisation in place
Chlorthal-dimethyl	**D**	EU: No authorisation in place
Clethodim	**A**	Codex: MRLs proposed for deletion
Clomazone	**Q**	
Clopyralid	**I**	
Cyanazine	**C**	APVMA – Nominated for review EU: No authorisation in place
Desmedipham	**C**	EU: Proposed non-renewal
Dichlobenil	**O**	EU: No authorisation in place
Diclofop-methyl	**A**	
Diflufenican	**F**	EU: Candidate for substitution
Dimethenamid-P	**K**	

Active Constituents	Chemical Group	Comment
Diquat	L	APVMA - Currently under review EU: No authorisation in place
EPTC	J	EU: No authorisations in place
Ethofumesate	J	
Flazasulfuron		
Fluazifop-P	A	
Flumioxazin	G	EU: Candidate for substitution
Fluometuron	C	
Fluroxypyr	I	
Glufosinate	N	EU: No authorisation in place
Glyphosate	M	Ongoing issues internationally EU: Under review
Haloxyfop-P	A	
Hexazinone	C	APVMA – Nominated for review EU: No authorisation in place
Imazamox	B	
Imazethapyr	B	EU: No authorisation in place
Ioxynil	C	EU: No authorisation in place
Isoxaben	O	
Isoxaflutole	H	
Linuron	C	EU: No authorisation in place
MCPA	I	
MCPB		
MSMA	Z	
Mecoprop	I	
Methabenzthiazuron	C	EU: No authorisation in place
Metolachlor/ S-metolachlor	K	
Metribuzin	C	EU: Candidate for substitution
Napropamide	K	
Nicosulfuron	B	EU: Candidate for substitution
Norflurazon	F	EU: No authorisation in place
Oryzalin	D	
Oxyfluorfen	G	
Oxadiazon	G	EU: No authorisation in place
Paraquat	L	APVMA - Currently under review EU: No authorisation in place Rotterdam Convention - nomination
Pelargonic acid		
Pendimethalin	D	EU: Review outcome not positive
Phenmedipham	C	EU: Review outcome not positive
Picloram	I	APVMA – Nominated for review
Prodiamine	D	
Prometryn	C	
Propachlor	K	EU: No authorisation in place
Propanil	C	EU: No authorisation in place
Propazine	C	
Propyzamide	D	
Prosulfocarb	J	
Prosulfuron	B	
Quinclorac	I	
Quizalofop-P-ethyl	A	Canada: Under re-evaluation - proposed completion June 2019.

Active Constituents	Chemical Group	Comment
		EU: Candidate for substitution
Rimsulfuron	B	
Saflufenacil	G	EU: No authorisation in place
Sethoxydim	A	EU: No authorisation in place
Siduron	C	
Simazine	C	APVMA – Nominated for review EU: No authorisation in place
Terbacil	C	EU: No authorisation in place
Terbuthylazine	C	
Terbutryn	C	EU: No authorisation in place
Tralkoxydim	A	EU: Authorisation expired 30/04/2019
Triasulfuron	B	EU: Authorisation expired 18/05/2020
Tri-allate	J	EU: Candidate for substitution
Triclopyr	I	
Trifluralin	D	EU: No authorisation in place

Europe

In the EU, pesticide active ingredients must be reviewed every 10 to 15 years. The review process takes about three years to complete. Registrants must apply for renewal no later than 36 months prior to the expiration date. If chemical companies do not support the review of their substance, approval of the substance will automatically expire in the EU on a set date.

If substances do not come within EU cut-off criteria, they are likely to be removed from use in the EU, and produce with residues of the banned pesticides will be banned from the market, or the maximum residue limit reduced.

Acephate: SP formulations cancelled; handheld mistblowers prohibited; use in public areas prohibited; reduction in application rate, max number of applications; increased re-entry periods and re-treatment intervals and use on potatoes cancelled

Chlorpyrifos: Commission Regulation (EU) 2020/1085 set all MRLs at 0.01 mg/kg as of November 13, 2020.

Clothianidin: Berry fruit, Fruiting vegetables, ornamentals, pome fruit, turf Reduction in yearly total rate

Chlorothalonil - Withdrawal authorisations by 20 November 2019. Max period of grace: 20 May 2020. Commission Implementing Regulation (EU) 2019/677 https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019R0677&from=EN

Commission Implementing Regulation (EU) 2018/1865

Uniconazole-P: The use on greenhouse ornamentals grown for cut flowers cancelled; re-entry periods & PPE updated.