

Potato – Processing Fund

2017/18
ANNUAL REPORT



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The projects in this report have been funded by Horticulture Innovation Australia Limited using sources including the potato – processing levy, Australian Government contributions and, in some instances, co-contributions from a variety of sources.



SUMMARY BY
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We're for growers

At Hort Innovation it's our job to work with industry to invest the potato processing levy and Australian Government contributions into initiatives to help the industry be as productive and profitable as possible – and 2017/18 was another fantastic year of growing better, together.

With **more than \$436,000 invested by Hort Innovation into R&D during 2017/18**, including into several new projects, I'm happy to be able to share with you all the key insights in this Hort Innovation Potato – Processing Fund Annual Report.

You'll find a top-level list of all R&D investments from the year on **p3**, and can explore the research projects in more detail from **p4**. Just some of the highlights include vital work into tomato potato psyllid surveillance, detection and coordination, plus a host of other strong investments to help the industry manage key pests and diseases.

On a personal note, thank you for welcoming me as your new Relationship Manager. I know that during 2017/18 my predecessor, Christian Patterson, enjoyed getting to connect with you about everything going on in the Potato – Processing Fund, and getting to hear your thoughts and share ideas. During 2018/19 I'm looking forward to doing the same, with even more opportunities to connect in person and a reminder that you that you can reach me any time at **jane.wightman@horticulture.com.au** or on 0427 142 046 if there's something you'd like to ask or discuss around levy investments.

I also encourage you to explore the easy ways you can stay close to all of the good things your levy is achieving throughout the year, including...

- » **Becoming a member.** Paying a levy doesn't automatically make you a Hort Innovation member, but signing up is free at **www.horticulture.com.au/membership**. As well as providing the opportunity for voting rights at the organisation's Annual General Meeting, Hort Innovation membership includes exclusive email alerts with industry-specific news and opportunities, direct invitations to explore investment updates and more.
- » **Checking out Hortlink.** This digital publication provides an update on all new, ongoing and recently completed investments in the Hort Innovation Potato – Processing Fund. The latest edition is always available from the Potato – Processing Fund page at **www.horticulture.com.au/potato-processing**, while members have *Hortlink* sent straight to their inboxes.

Here's to another great year of investments and connection in 2018/19,

Jane Wightman
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Making levy investments

Discover how the processing potato levy and Australian Government contributions are invested through the Hort Innovation Potato – Processing Fund in this quick recap.

Where do investment ideas come from?

Great investments start with great ideas, and Hort Innovation encourages all industry participants to share their thoughts and suggestions for the research initiatives they want to see.

Ideas can be submitted any time via Hort Innovation's simple Concept Proposal Form. Visit www.horticulture.com.au/innovation-concept-pipeline.

Ideas can be for your specific industry – to be funded by the industry levy and Australian Government contributions – or they can be for Hort Innovation's strategic partnership initiative, Hort Frontiers. Hort Frontiers projects address broader, longer-term and more complex issues facing Australian horticulture as a whole, and are funded through partnerships with co-investors. Visit www.hortfrontiers.com.au for more.

How are levy decisions made?

Let's talk 'SIPs' and 'SIAPs'!

Investments specific to the Hort Innovation Potato – Processing Fund are guided by the industry's Strategic Investment Plan (SIP), which was finalised by Hort Innovation in April 2017 after close consultation with potato processors and other industry stakeholders.

The SIP outlines key industry priorities for investment and can be found on the Potato – Processing Fund page at www.horticulture.com.au/potato-processing.

The SIP document is used like a 'roadmap' by the industry's Strategic Investment Advisory Panel (SIAP) – a panel made up of processors and other industry representatives, which has a key role to play in the investment process. The SIAP discusses investment ideas at consultation meetings, with the SIP guiding them, in order to provide advice to Hort Innovation on potential levy investments.

Details of the SIAP panellists and summaries of the SIAP's meetings can be found at www.horticulture.com.au/potato-processing.

What happens next?

The SIAP's advice is used by Hort Innovation to work suitable ideas into project proposals. The proposals are then made public for potential delivery partners to submit responses. Current opportunities are always listed at www.horticulture.com.au/delivery-partners.

At the end of the process the responses are assessed, often with the assistance of industry, and the best delivery partner for the work is chosen. A contract is then issued and the work begins.

How can I keep track of investments?

Newly contracted projects are announced in Hort Innovation's *Hortlink* publication, with the latest edition emailed directly to members three times a year and always available from the Potato – Processing Fund page at www.horticulture.com.au/potato-processing. *Hortlink* also provides updates on ongoing and recently completed investments.



R&D project list 2017/18

NEW INVESTMENTS IN 2017/18

PT17000	Diagnostic capability to detect <i>Candidatus Liberibacter solanacearum</i> (CLSo)
PT17000	Developing and implementing high throughput diagnostic test for <i>Candidatus Liberibacter solanacearum</i> (CLSo)
ST16008	AgVet collaborative forum
ST17000	Generation of data for pesticide applications in horticulture crops 2018
PT16000	Extension activities for the Australian potato industry – pest and disease app
PT16000	Extension activities for the Australian potato industry – literature review and survey

ONGOING INVESTMENTS IN 2017/18

PT15008	Extension of the PreDicta Pt potato diagnostic service
PT16001	Impact of groundwater quality on management of centre pivot grown potato crops
PT16002	Exploring Spongospora suppressive soils in potato production
PT16004	Review of the national biosecurity plan for the potato industry and development of a biosecurity manual for potato producers
PT16005	Potato industry minor use program
MT16009	An IPM extension program for the onion and potato industries
MT16018	National tomato potato psyllid (TPP) program coordinator



INVESTMENTS COMPLETED IN 2017/18

PT14001	Monitoring psyllids and psyllid predators in Australian potato crops*
PT14002	Spongospora infection of potato roots – ecology epidemiology and control*
PT16003	Navigating the wealth of soil health information and identification of opportunities
MT15032	Monitoring and evaluation framework for the industry Strategic Investment Plan
MT15033	Strategic Investment Plan
MT16016	Surveillance of tomato potato psyllid in the eastern states and South Australia

* These flagged projects did not involve the industry levy, and were instead funded by Hort Innovation using voluntary contributions and Australian Government funding. They were carried over from the original Horticulture Australia Limited (HAL).

During the 2017/18 financial year, all Australian levy paying horticulture industries also contributed to across-industry projects addressing issues that affect horticulture as a whole. Visit www.horticulture.com.au/across-horticulture for financial documents and information on this program.

R&D report

Take a closer look at some of the key levy investments in the Hort Innovation Potato – Processing Fund during 2017/18. Any resources from these and other levy-funded projects – such as fact sheets, guides and more – are published on the potato processor page at www.horticulture.com.au/potato-processing as they become available.

Diagnostic capability to detect *Candidatus Liberibacter solanacearum* (CLso) (PT17000)

NEW IN 2017/18

Key research provider: The Victorian Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

This investment began in late 2017 to help bolster efforts to monitor and contain tomato potato psyllid and the damage it causes. It is tasked with improving diagnostic capabilities related to *Candidatus Liberibacter solanacearum* (CLso) – the bacterium that can be carried by the psyllid and that is associated with ‘zebra chip’ disease in potatoes. The psyllid infects tubers with disease, and the disease can be transferred by potato tubers. It is expected the project will improve the ability to confidently detect CLso in surveillance and certification activities in an accurate, cost-effective and automated, large-scale manner.

Developing and implementing a high throughput diagnostic test for *Candidatus Liberibacter solanacearum* (CLso) (PT17000)

NEW IN 2017/18

Key research provider: South Australian Research Institute (SARDI)

This investment is related to the above CLso diagnostics work. It is developing protocols for automated, large-scale testing of potato leaves and tap root samples for area wide surveillance for CLso. It is also developing a new protocol for testing tuber samples for delivery via a new version of PreDicta Pt, and has a role to play in assisting Australian and New Zealand laboratories in calibrating their CLso protocols.

Surveillance of tomato potato psyllid in the Eastern States and South Australia (MT16016)

NOW COMPLETE

Key research provider: University of Tasmania

This now-concluded project began in April 2017, with levy investment from the potato and vegetable industries. Its surveillance activities were designed to bolster psyllid surveillance for the early detection of tomato potato psyllid (TPP) should it cross from Western Australia into South Australia and the eastern states, including Tasmania. Surveillance involved potato crops as well as other solonaceous vegetables (including capsicum, eggplant and chilli), especially those grown in greenhouses.

During its course, the project offered growers access to sticky traps for TPP surveillance – with more than 3000 traps distributed across Tasmania, Victoria, New South Wales and Queensland, along with trapping protocols and other key information. From analysis of returned traps, some 6400 native psyllids were detected, but none were known to feed on crop plants.

The project also facilitated a host of training workshops on TPP for industry, while also liaising with the various state agencies involved in TPP efforts, the national TPP coordinator, and with other relevant projects, with the goal of developing a strong legacy for ongoing surveillance to help safeguard the industry.

TPP surveillance work is set to continue through a new multi-industry, national program.

Want to keep up to date with the latest information on new, ongoing and recently completed R&D investments throughout the year? Check out Hort Innovation’s **Hortlink** publication – the latest edition is always available from www.horticulture.com.au/potato-processing.



National tomato potato psyllid (TPP) program coordinator (MT16018)

Key research provider: AUSVEG

This ongoing, multi-industry investment is responsible for coordinating the development and implementation of a national tomato potato psyllid (TPP) management strategy – essentially helping ensure research and development, engagement and other response efforts related to the pest across the various industries and areas it affects are coordinated, prioritised and strategic. To this end, in October 2017, Alan Nankivell began in the role of national TPP program coordinator under the project – serving as a point of contact between the various TPP-affected industries, government and service providers, to help implement TPP management in Western Australia and to prepare eastern-state growers.

Generation of data for pesticide applications in horticulture crops 2018 (ST17000)

NEW IN 2017/18

Key research provider: Peracto

The generation of pesticide residue, efficacy and crop safety data is required to support label registration and minor use permit applications made to the Australian Pesticides and Veterinary Medicines Authority which, when approved, provide access to safe and effective chemicals for the management of pests, weeds and diseases.

In May, Hort Innovation announced the securing of more than \$1 million in assistance grants under the Australian Government's Access to Industry Uses of Agricultural and Veterinary (AgVet) Chemicals program. Through this project, the grant funding is being used, along with levy contributions, to generate the data required for a range of registration and minor use applications across a variety of horticulture crops, including for the potato industry.

Potato industry minor use program (PT16005)

Key research provider: Hort Innovation

Through this project, levy funds and Australian Government contributions are used to submit renewals and applications for new minor use permits for the potato industry, as required. These submissions are prepared and submitted to the Australian Pesticides and Veterinary Medicines Authority.

For more on minor use permits, including a list of permits, see **p8**.

All current permits for the industry remain searchable at portal.apvma.gov.au/permits, while permit updates are also circulated in Hort Innovation's *Growing Innovation* e-newsletter, which levy-paying members receive monthly. Not a member? Sign up to the Hort Innovation membership program for free at www.horticulture.com.au/membership.

Navigating the wealth of soil health information and identification of opportunities (PT16003)

NOW COMPLETE

Key research provider: The Tasmanian Institute of Agriculture

This investment has reviewed the current state of knowledge around factors that influence soil health in potato growing. From this, its goal was to produce grower-friendly resources to allow soil health information and R&D to be better utilised on-farm, and also help identify priorities for future R&D and extension around soil health and management practices.

A literature review was produced covering more than 220 references on the different aspects of soil health (physical, chemical and biological), how to measure them, and how they can be influenced by management practices and, at the time of writing, fact sheet and video information was being readied for release to growers.



Extension activities for the Australian potato industry – literature review and survey (PT16000)

NEW IN 2017/18 & NOW COMPLETE

Key research provider: AgAims

This investment was tasked with identifying and documenting potential opportunities for improving Australian potato seed quality and handling practices, to ultimately support growers in the adoption of improved, sustainable best practice for the delivery of high-quality seed.

The project began with a review of international research and best practice on seed handling, including post-harvest handling, storage and seed piece treatments, as well as the effect on final crop outcomes of physiological age of seed, seed piece size, and whole versus cut seed.

This was followed by grower surveys, both online and through phone and face-to-face interviews. The surveys were designed to look at and quantify industry practices – for example, cut seed has a significant potential impact on seed quality, so how important is cut seed use in the industry, what percentage of the national seed supply is cut, and what is the primary reason to cut seed? Other questions were aimed at understanding how quality is managed and regulated. Growing location, seasons when crop is grown and storage questions were also asked, aimed at understanding potential stress loading on seed.

Together the review and survey information on current and best practice have been developed into a report for sharing with industry.

Extension of the PreDicta Pt potato diagnostic service (PT15008)

Key research provider: South Australian Research and Development Institute (SARDI)

Beginning in mid-2017, this investment is responsible for expanding the PreDicta Pt testing system to help minimise the impact of soilborne and seedborne diseases on Australian potato businesses.

Running since 2013, PreDicta Pt is the commercial DNA-based testing service that allows specific pathogens to be identified prior to the planting of potatoes. Available through accredited providers in the south-eastern states, the test results help identify and manage risks related to powdery scab, black dot and root knot nematode.

This project is expanding the service into other major production areas of Australia, adding new soil tests, and giving potato growers access to testing on seed tubers.

Exploring Spongospora suppressive soils in potato production (PT16002)

Key research provider: The New Zealand Institute for Plant & Food Research

This ongoing investment is seeking to confirm the presence of a soil (or multiple soils) with characteristics that suppress Spongospora diseases of potato, including tuber powdery scab and root galling. If suppression is demonstrated, the project team will identify the mechanisms for suppression and determine if the suppressive properties are transferrable to non-suppressive soils, for the benefit of the Australian potato industry.

Impact of groundwater quality on the management of centre-pivot-grown potato crops (PT16001)

Key research provider: Serve-Ag (E.E. Muir & Sons)

This investment, for and funded by both the processing and fresh potato industries, is looking at groundwater quality in areas of potato production in South Australia (where groundwater quality is most variable) and investigating how regional and seasonal water-quality variability impacts on potato production and quality. It will ultimately deliver effective management strategies and tools for sustainable and profitable potato production under varying soil and water conditions.

An IPM extension program for the potato and onion industries (MT16009)

Key research provider: IPM Technologies

This project, for and funded by the processing potato, fresh potato and onion industries, has a focus on integrated pest management (IPM). Its core activities are to support growers in adopting IPM on farm – improving pest management with minimal pesticide use and a reduction in associated costs. This includes workshops, the use of demonstration sites with commercial crops, and the production of materials such as articles, guides and case studies distributed in industry channels.

The project is also responsible for training advisors from Australia's major potato and onion growing regions in IPM.

With the threat of tomato potato psyllid, additional funding from the potato industries allows for specific activities related to the pest.

Review of the national biosecurity plan for the potato industry and development of a biosecurity manual for potato producers (PT16004)

Key research provider: Plant Health Australia

This ongoing investment is responsible for updating the industry's biosecurity plan – identifying high-priority endemic and exotic pests and diseases along with the risk mitigation activities required to reduce their biosecurity threat. It has also developed a manual for growers to help grow awareness of key pests and diseases, and the steps that can be taken to minimise their risk. The manual also highlights legislative changes to ensure growers are up to date regarding their official biosecurity obligations.



Full details of completed research can be found in project final reports which, when finalised, are available to order at www.horticulture.com.au/final-report-order-form. Final reports are free to Australian horticulture levy payers, registered Hort Innovation members and industry representative bodies.

Minor use permits

Why minor use permits?

While the use of pesticides and other chemicals in the horticulture industry is being modified through the increasing uptake of integrated pest management approaches, there remains a need for the strategic use of specific chemicals.

Chemical companies submit use patterns for product label registrations to the Australian Pesticides and Veterinary Medicines Authority (APVMA), and the potato industry is generally provided with a number of label registrations because of its 'major' crop status in this area. However, there are instances where chemical companies consider the market size too small to generate adequate commercial returns, based on the R&D investment required. This is where minor use permits come into play. The APVMA's national permit system adds some flexibility to the approval process and provides a legal framework that can allow access to products for minor use purposes.

Permits in 2017/18

During the 2017/18 financial year, a successful renewal for PER14765 was prepared by Hort Innovation and submitted to the APVMA, facilitated through the *Potato industry minor use program* (PT16005). Details of the permit can be found in the table below.

Current permits

Below is a list of minor use permits for the potato industry, current as of September 1, 2018.

PERMIT ID	DESCRIPTION (CHEMICAL/CROP/PEST OR USE)	ORIGINAL DATE OF ISSUE	EXPIRY DATE	PERMIT HOLDER
PER80344	Chlorpyrifos / Potato / Black beetle, wingless grasshopper, red legged earth mite	02-Jan-15	30-Sep-20	Growcom
PER12612 version 3	Alpha-cypermethrin / Potato / Garden weevil <i>Tasmania and Western Australia only</i>	29-Jun-11	30-Apr-21	Hort Innovation
PER14722 version 2	Abamectin / Capsicum, cucumber, eggplant, zucchini, tomato, sweet corn, chilli, paprika, potato, snow pea and sugar snap pea crops / Tomato red spider mite	17-Feb-15	30-Sep-20	Hort Innovation
PER14765 version 3	Hexythiazox / Cucurbits, fruiting vegetables, snow pea, sugar snap pea and potato / Tomato red mite (<i>Tetranychus evansi</i>), two-spotted mite, broad mite and tomato russet mite	21-Feb-15	31-Sep-19	Hort Innovation

All efforts have been made to provide the most current, complete and accurate information on these permits, however you should always confirm all details on the APVMA website at portal.apvma.gov.au/permits. Details of the conditions of use associated with these permits can also be found on the APVMA site.

Minor use permit updates are circulated in Hort Innovation's e-newsletter, **Growing Innovation**, which levy-paying members receive monthly. Not a member? Sign up for free at www.horticulture.com.au/membership.

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Financial statement

Financial operating statement 2017/18

	R&D (\$)	TOTAL (\$)
	2017/18 July – June	2017/18 July – June
OPENING BALANCE	601,563	601,563
Levies from growers (net of collection costs)	401,544	401,544
Australian Government money	245,275	245,275
Other income*	14,653	14,653
TOTAL INCOME	661,473	661,473
Project funding	436,924	436,924
Consultation with and advice from growers	31,706	31,706
Service delivery – Base	17,169	17,169
Service delivery – Shared	25,999	25,999
Service delivery – Fund specific	31,886	31,886
TOTAL EXPENDITURE	543,684	543,684
Levy contribution to across-industry activity	10,493	10,493
CLOSING BALANCE	708,859	708,859
Levy collection costs	21,697	21,697

At the end of 2016/17, the industry's pro rata share of levy funds were committed to strategic reserves (\$130,868 for R&D), and so have been deducted from the 2017/18 opening balance.

* Interest, royalties

Service delivery costs explained

Base service delivery (flat rate) = keeping the lights on

This figure contributes to the standard fixed costs that are incurred with the running of the business (for example, costs relating to rent, utility bills, equipment). These costs are calculated on a monthly basis and are based on actual program expenditure.

Shared service delivery (flat rate) = related to program delivery

Shared costs are related to program delivery and include costs that are incurred in supporting activities relating to R&D and marketing programs that are not attributable to any one levy industry (for example, costs relating to procurement and information technology activities). These costs are calculated on a monthly basis and are based on actual program expenditure.

Fund specific service delivery (flat rate for 2017/18) = direct servicing costs

These are the actual costs for activities and services that are directly incurred in the administration of levy program expenditure, and which are identifiable and attributable to a specific levy investment fund (for example, costs around direct relationship, marketing and fund management, and logistical costs around industry advisory meetings and activities). From 2018/19 these costs will be charged at cost on a monthly basis.

For more information explaining the costs in the financial summary, visit www.bit.ly/2x7ERLC.

Hort Innovation

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