Government of South Australia
Department of Primary Industries and Regions

Our ref: CORP F2026/000198
Receipt No: 24117647

CORPORATE SERVICES
Level 20
11 Waymouth Street
Adelaide SA 5000
GPO Box 1671
Adelaide SA 5001
DX 667
Tel 8429 0422
www.pir.sa.gov.au

12 October 2026

Removed from Disclosure Log

Dear Removed from Disclosure Log

Determination under the *Freedom of Information Act 1991*

I refer to your application made under the *Freedom of Information Act 1991* which was received by the Department of Primary Industries and Regions (PIRSA) on 21 August 2026, seeking access to the following:

> *"1. All laboratory test results, diagnostic reports on acaricide/miticide resistance testing of Varroa mites collected from the Pooginook Detection Zone, from September 2025 to present.*
>
> *2. All internal PIRSA emails, briefing notes, or correspondence between PIRSA and SARDI, NSW DPIRD, or Biosecurity Queensland referencing suspected or confirmed acaricide resistance in mites associated with the Pooginook Detection Zone.*
>
> *3. Any internal PIRSA risk assessment, briefing note, or ministerial briefing referencing acaricide resistance and its relevance to South Australia, dated between 1 January 2026 and 31 May 2026.*
>
> *4. Any documents recording the date on which PIRSA staff, contractors, or the Chief Inspector of Stock first became aware — whether by internal advice, laboratory result, or external notification — that mites in the Pooginook Detection Zone carried the L925I and/or Y215H resistance mutations.*
>
> *5. All records of any Notifiable Occurrence submitted under the Chief Inspector of Stock Permission relating to Consignor* Removed from Disclosure Log */ Goldfields Honey Bee and Pollination Services Pty Ltd (Objective ID A7477091,* Removed from Disclosure Log *), including any notification of testing/treatment failure, acaricide resistance, or Varroa status change, from 21 April 2026 to present.*
>
> *6. A copy of PIRSA's internal Notifiable Occurrences register (or equivalent log/database) covering all bee/hive entry permits from 1 January 2026 to present, specifically identifying which permits recorded resistance-related notifications."*

Upon receipt of your application, PIRSA's Senior Freedom of Information Advisor contacted you seeking the timeframes for paragraphs 2 and 4.

Accordingly, on 21 August 2026, your application was amended as follows:

> *"1. All laboratory test results, diagnostic reports on acaricide/miticide resistance testing of Varroa mites collected from the Pooginook Detection Zone, from September 2025 to present.*
>
> *2. All internal PIRSA emails, briefing notes, or correspondence between PIRSA and SARDI, NSW DPIRD, or Biosecurity Queensland referencing suspected or confirmed acaricide resistance in mites associated with the Pooginook Detection Zone, from 25 August 2025 to 31 May 2026.*
>
> *3. Any internal PIRSA risk assessment, briefing note, or ministerial briefing referencing acaricide resistance and its relevance to South Australia, dated between 1 January 2026 and 31 May 2026.*
>
> *4. Any documents recording the date on which PIRSA staff, contractors, or the Chief Inspector of Stock first became aware — whether by internal advice, laboratory result, or external notification — that mites in the Pooginook Detection Zone carried the L925I and/or Y215H resistance mutations, from 25 August 2025 to 31 May 2026.*
>
> *5. All records of any Notifiable Occurrence submitted under the Chief Inspector of Stock Permission relating to Consignor* Removed from Disclosure Log */ Goldfields Honey Bee and Pollination Services Pty Ltd (Objective ID A7477091,* Removed from Disclosure Log *), including any notification of testing/treatment failure, acaricide resistance, or Varroa status change, from 21 April 2026 to present.*
>
> *6. A copy of PIRSA's internal Notifiable Occurrences register (or equivalent log/database) covering all bee/hive entry permits from 1 January 2026 to present, specifically identifying which permits recorded resistance-related notifications."*

As per contact made with you on 18 September 2026 from PIRSA's Senior Freedom of Information Advisor, you accepted an extension to the legislative time until 12 October 2026.

Accordingly, the following determination has been finalised.

I have located twenty-six documents that are captured within the scope of your request.

Determination 1

I have determined that access to the following documents is **granted in full**:

Doc No.	Description of document	No. of Pages

3	Email from Objective Administrator to PIRSA officer dated 27/4/2026 re Minute from PIRSA to Minister for Primary Industries and Regional Development – Varroa treatment resistance – Workflow Task Ready: Notification: Briefing approved by Deputy Chief Executive, PIRSA	2
4	Email from Objective Administrator to PIRSA officer dated 28/5/2026 re Minute from PIRSA to Minister for Primary Industries and Regional Development – Varroa treatment resistance update – Workflow Task Ready: Notification: Briefing approved by Manager	2
5	Email from Objective Administrator to PIRSA officer dated 29/5/2026 re Minute from PIRSA to Minister for Primary Industries and Regional Development – Varroa treatment resistance update – Workflow Task Ready: Notification: Briefing has been approved or noted by Minister	2
7a	Link provided in Documents 7 and 8 – AHBIC Biosecurity Update – Incursion of Resistant Varroa Mite dated 23/4/2026	7
8	Email from Australian Honey Bee Industry Council to PIRSA officer dated 23/4/2026 re incursion of varroa mites in Australia	1

Determination 2

I have determined that access to the following documents is **granted in part**:

Doc No.	Description of document	No. of Pages
1	Email from PIRSA Biosecurity dated 22/5/2026 re Biosecurity Notice – Varroa detection update, 22/5/2026	8
2	PIRSA Apiary Unit update prepared for South Australian Apiarists Association Executive meeting on 1/5/2026	3
3a	Attachment to Document 3 – Minute from Chief Executive, PIRSA to Minister for Primary Industries and Regional Development dated 27/4/2026 re Varroa treatment resistance and link to SA	5
6	Emails between officers of PIRSA and NSW Department of Primary Industries and Regional Development dated 16/4/2026 re varroa mite	2
7	Email from Bee Biosecurity Officer, PIRSA to PIRSA officers dated 23/4/2026 re article on chemical resistance	1
10	Email between PIRSA officers dated 25/5/2026 re varroa mite details for Consultative Committee on Emergency Plant Pests	1
12	Email thread between Program Coordinator, Apiaries, PIRSA and NSW Department of Primary Industries and Regional Development dated 11/5/2026 to 28/5/2026 re varroa samples to NSW DPIRD from SA	3
12a	Attachments to Document 12 – Sampling of Varroa Mites for Molecular Study dated 3/3/2026, EMAI Miticide resistance testing request dated 11/5/2026	6

15	Email thread between PIRSA officers dated 29/5/2026 re Biosecurity Notice – PIRSA investigating potential resistance varroa in Riverland region	9
16	Emails between officers of PIRSA and NSW Department of Primary Industries and Regional Development dated 11/5/2026 and 22/5/2026 re varroa samples to NSW DPIRD from SA	2
16a	Attachment to Document 16 - NSW Department of Primary Industries and Regional Development Diagnostic report – Suspect resistance of Varroa mites collected from SA apiaries to synthetic miticides SA	5
17	Spreadsheet – Varroa Mite Detection and Tracing Summary – Resistance Related chemicals register	33

The information removed from the above documents is pursuant to Clause 6(1) of Schedule 1 of the Freedom of Information Act.

The information removed consists of the following:

Documents 1, 2, 6, 7, 10, and 15

- Mobile telephone numbers of Departmental officers

Document 3a
- Mobile telephone number of a Departmental officer
- Identifying location information

Document 12
- Mobile telephone number of a Departmental officer
- Mobile telephone number of an individual
- Identifying location information

Document 12a
- Mobile phone telephone number of a Departmental officer
- Mobile telephone number of an individual
- The signature of a Departmental officer
- Identifying reference numbers and initials

Document 16
- Mobile telephone number of a Departmental officer
- Mobile telephone number of an individual

Document 16a
- Mobile telephone number of a Departmental officer
- Identifying reference numbers

Document 17
- Names, addresses and location data of third parties
- Identifying reference numbers and acronyms
- Other personal information where consent was not provided to release

- Initials of Departmental officers

The term 'personal affairs' has been held to involve 'matters of private concern to an individual' and the 'composite collection of activities personal to the individual concerned'.

Consent has not been provided to disclose the name of the staff members and, accordingly, there would be an expectation that their personal information would not be released in this way.

As a mobile telephone number allows a person, including an officer of an agency, to be contacted outside of business hours and is information that is not ordinarily available to the public, the information is taken to concern the personal affairs of an individual.

Accordingly, it is considered that disclosure of this information would be an unreasonable intrusion into the privacy rights of the individuals concerned.

The remaining information removed from Document 2 is outside of the scope of your request.

Determination 3

I have determined that access to the following documents is **granted in part**:

Doc No.	Description of document	No. of Pages
9	Email from Program Coordinator, Apiaries, PIRSA to PIRSA officer dated 24/5/2026 re SA varroa destructor resistance testing report	24
9a	NSW Department of Primary Industries and Regional Development Diagnostic report – Suspect resistance of Varroa mites collected from SA apiaries to synthetic miticides	5
10a	Attachment to Document 10 – Spreadsheet detailing varroa resistant locations across Australia	2
11	Email thread between PIRSA officers dated 27/5/2026 re draft Biosecurity notice	4

The information removed from the above documents is pursuant to Clause 6(1) and Clause 7(1)(c) of Schedule 1 of the Freedom of Information Act.

The personal information removed pursuant to Clause 6(1) consists of the following:

Document 9

- Names of individuals
- Mobile telephone number of Departmental officer

Document 9a

- Names of individuals
- Mobile telephone number of Departmental officer

- Mobile telephone number of individual
- Identifying reference numbers

Document 10a
- Names, addresses and location data of individuals

Document 11
- Names of individuals
- Mobile telephone numbers of Departmental officers

The term 'personal affairs' has been held to involve 'matters of private concern to an individual' and the 'composite collection of activities personal to the individual concerned'.

As a mobile telephone number allows a person, including an officer of an agency, to be contacted outside of business hours and is information that is not ordinarily available to the public, the information is taken to concern the personal affairs of an individual.

Accordingly, it is considered that disclosure of this information would be an unreasonable intrusion into the privacy rights of the individuals concerned.

Clause 7(1)(c) states:

> *"**7 – Documents affecting business affairs***
> *(1) A document is an exempt document –*
> *(c) if it contains matter –*
> *(i) consisting of information (other than trade secrets or information referred to in paragraph (b)) concerning the business, professional, commercial or financial affairs of any agency or any other person; and*
> *(ii) the disclosure of which –*
> *(A) could reasonably be expected to have an adverse effect on those affairs or to prejudice the future supply of such information to the Government or to an agency; and*
> *(B) would, on balance, be contrary to the public interest"*

The information removed consists of the following:

- Document 9 and 9a:
  - Names of businesses

- Document 10a
  - Names of business
  - Location data of the business

- Document 11:
  - Names of businesses
  - Communications concerning the financial affairs of a business

In addressing the public interest test requirement for the Clause 7(1)(c) exemption, I have balanced the following factors:

In favour of the public interest:

- Meeting the objects of the Freedom of Information Act favouring access to documents.
- Ensuring optimal use of public resources.
- High level of interest in the accountability of public office holders.
- The importance of transparency and openness and the interest that the public has in the decision-making processes of Government.
- High level of media interest and community concern relating to the management of varroa mite.

Contrary to the public interest:

- Protecting the financial and business interests of third parties.
- Details of a company's financial circumstances would reveal information which is considered sensitive to the company concerned.
- A business should be able to interact with Government without fear that their communications are aired into the public domain.
- The names of businesses contained within internal communications should not be aired into the public domain where there may be an adverse effect on the companies concerned.
- The information contained within the documents is not widely published or disseminated.
- Disclosure of this information would be expected to prejudice the future supply of information to Government, as the level of trust in handling such information would be substantially diminished.
- If third parties cannot be assured of confidentiality by Government with respect to their commercially sensitive information, this would have the potential to harm business relationships with Government and hamper future dealings with agencies for the betterment of South Australia.

Having considered the various factors weighing for and against disclosure, I have determined that disclosure of these documents would, on balance, be contrary to the public interest.

Determination 4

I have determined that access to the following documents is **granted in part**:

Doc No.	Description of document	No. of Pages
4a	Attachment to Documents 4 and 5 - Minute from Chief Executive, PIRSA to Minister for Primary Industries and Regional Development dated 28/5/2026 re Varroa treatment resistance	5

14	Email thread between PIRSA officers dated 29/5/2026 re Biosecurity Notice – PIRSA investigating potential resistance varroa in Riverland region	10

The information removed from the above documents is pursuant to Clause 6(1) and Clause 9(1) of Schedule 1 of the Freedom of Information Act.

The personal information removed pursuant to Clause 6(1) consists of the following:

- Mobile telephone numbers of Departmental officers
- Identifying location information

The term 'personal affairs' has been held to involve 'matters of private concern to an individual' and the 'composite collection of activities personal to the individual concerned'.

As a mobile telephone number allows a person, including an officer of an agency, to be contacted outside of business hours and is information that is not ordinarily available to the public, the information is taken to concern the personal affairs of an individual.

Accordingly, it is considered that disclosure of this information would be an unreasonable intrusion into the privacy rights of the individuals concerned.

Clause 9(1) states:

> ***"9—Internal working documents***
> *(1) A document is an exempt document if it contains matter—*
> *(a) that relates to -*
> *(i) any opinion, advice or recommendation that has been obtained, prepared or recorded; or*
> *(ii) any consultation or deliberation that has taken place,*
> *in the course of, or for the purpose of, the decision-making functions of the Government, a Minister or an agency; and*
> *(b) the disclosure of which would, on balance, be contrary to the public interest."*

The information removed pursuant to Clause 9(1) consists of communications between Departmental officers as part of internal decision-making functions of an agency.

In addressing the public interest test for the exemption, I have balanced the following factors:

In favour of the public interest:

- Meeting the objects of the Freedom of Information Act favouring access to documents.
- Ensuring optimal use of public resources.
- High level of interest in the accountability of public office holders.
- The importance of transparency and openness and the interest that the public has in the decision-making processes of Government.

- High level of media interest and community concern relating to the management of varroa mite.

Contrary to the public interest:

- The recent age of the information was considered and the continuing relevance of the matters.
- Providing an agency with the ability to undertake internal consultation without unnecessary interference.
- Release of this information would discourage the flow of free exchange of ideas and options during deliberative processes.
- Preserving the integrity of information-gathering processes, including some internal communications, leading up to the finalisation of decisions.
- The information contained within the documents is not publicly known.
- The confidentiality of some subjects must be maintained for internal decision-making purposes of Government.
- The comments made were documented in an open and frank manner. It is considered that if this detail was released, it would jeopardise the willingness of Departmental officers to provide comments in the future for the decision-making purposes of the agency and the Government.
- Enabling documents to be prepared for consideration without the fear that they are released into the public domain prior to finalisation and approval.

Having considered the various factors weighing for and against disclosure, I have determined that disclosure of these documents would, on balance, be contrary to the public interest.

Determination 5

I have determined that access to the following documents is **refused**:

Doc No.	Description of document	No. of Pages
13	Email from Department of Agriculture, Fisheries and Forestry to CCEEP members dated 29/5/2026 re varroa detection in South Australia	3
13a	Attachment to Document 29 – Document dated 28/5/2026	5

Access to the above documents is refused pursuant to Clause 5(1)(a)(i) and (b) of Schedule 1 of the Freedom of Information Act.

The documents contain information obtained from consultations with other jurisdictions of Australia through the Consultative Committee on Emergency Plant Pests (CCEPP).

In addressing the public interest test for the Clause 5(1) exemption, I have balanced the following factors:

In favour of the public interest:

- Meeting the objects of the Freedom of Information Act favouring access to documents.
- Ensuring optimal use of public resources.
- High level of interest in the accountability of public office holders.
- The importance of transparency and openness and the interest that the public has in the decision-making processes of Government.
- High level of media interest and community concern relating to the management of varroa mite
- The knowledge that government agencies are working together to protect the honeybee industry.

Contrary to the public interest:

- The information is prevented from release due to the confidentiality provisions of the Emergency Plant Pest Response Deed (EPPRD), which is a government-industry partnership, outlining the national governance and investment in responding to and eradicating emergency plant pests.
- The release of this information could prejudice the future supply and flow of information between Commonwealth and State/Territory government agencies through the CCEPP as the information was being provided in good faith to jurisdictions and may not be as easily shared in the future if there is a concern that information will be divulged into the public domain.
- Disclosure would be expected to compromise the outcomes of the CCEPP in responding to emergency responses.
- The release of this information could compromise Australia's honey and honeybee pollination plant industries.
- The recent age of the information and the ongoing relevance of the matter was considered.
- The information is not of public knowledge.
- The release of this information could cause damage to inter-governmental relations as the information was derived through communications with jurisdictions across Australia with an implied understanding of confidence.

Having considered the various factors weighing for and against disclosure, I have determined that disclosure of these documents would, on balance, be contrary to the public interest.

Determination 6

I have determined that access to the following document is **refused**:

Doc No.	Description of document	No. of Pages
11a	Attachment to Document 11 – Draft Biosecurity notice	2

Access to the above document is refused pursuant to Clause 9(1) of Schedule 1 of the Freedom of Information Act.

The document consists of an early draft version of a document for internal-decision making purposes of an agency.

In favour of the public interest:

- Meeting the objects of the Freedom of Information Act favouring access to documents.
- Ensuring optimal use of public resources.
- High level of interest in the accountability of public office holders.
- The importance of transparency and openness and the interest that the public has in the decision-making processes of Government.

Contrary to the public interest:

- The recent age of the information was considered and the continuing relevance of the matters.
- Enabling documents to be prepared for consideration without the fear that they are released into the public domain prior to finalisation and approval.
- Protection of the deliberative processes of Government.
- Providing an agency with the ability to undertake internal consultation without unnecessary interference.
- Release of this information would discourage the flow of free exchange of ideas and options during deliberative processes.
- Preserving the integrity of information-gathering processes leading up to the finalisation of decisions.
- Disclosing this information may compromise the manner in which information is gathered in the future for the decision-making processes of Government to the detriment of the betterment for South Australia.

Having considered the various factors weighing for and against disclosure, I have determined that disclosure of this document would, on balance, be contrary to the public interest.

Right of Appeal

If you are dissatisfied with this determination, you are entitled to exercise your right of review and appeal as outlined in the attached documentation Making a Freedom of Information Application | State Records of South Australia (archives.sa.gov.au), by completing the "FOI Application Form for Internal Review of a Determination" and returning the completed form to:

Freedom of Information Principal Officer
Department of Primary Industries and Regions
GPO Box 1671
ADELAIDE SA 5001

or via email PIRSA.FOI@sa.gov.au

FOI Disclosure Log

In accordance with the requirements of Premier and Cabinet Circular PC045, details of your application, and the documents to which you are given access, will be published in PIRSA's disclosure log. A copy of PC045 can be found at http://dpc.sa.gov.au/__data/assets/pdf_file/0019/20818/PC045-Disclosure-Log-Policy.pdf

If you disagree with publication, please advise the undersigned in writing within fourteen calendar days from the date of this determination.

Should you require further information or clarification with respect to this matter, please contact Ms Lisa Farley, Senior Freedom of Information Advisor on 8429 0422 or email PIRSA.FOI@sa.gov.au.

Yours sincerely

Melissa McIsaac
Accredited Freedom of Information Officer
DEPARTMENT OF PRIMARY INDUSTRIES AND REGIONS

Farley, Lisa (PIRSA)

From:	Objective Administrator <pirsa.darms@sa.gov.au>
Sent:	Monday, 27 April 2026 1:14 PM
To:	Harvey, Adrian (PIRSA)
Subject:	A7474002 Minute from PIRSA to Minister Scriven - Varroa treatment resistance 20042026 (A7474002) - Workflow Task Ready: Notification: Briefing has been approved by the Deputy Chief Executive and submitted to the Minister's Office
Attachments:	Attached file: A7474002 Minute from PIRSA to Minister Scriven - Varroa treatment resistance 20042026.obr

Notification: Briefing has been approved by the Deputy Chief Executive and submitted to the Minister's Office

Workflow: PIRSA Briefings Workflow

Slip: A7474002 Minute from PIRSA to Minister Scriven - Varroa treatment resistance 20042026

Task: **Notification: Briefing has been approved by the Deputy Chief Executive and submitted to the Minister's Office**

Instructions:

Please be advised that this briefing has been approved by the Deputy Chief Executive and submitted to the Minister's Office.

Previous task

Approved by Deputy CE 27/4/26

Mead, Danette ***(Actioned on 27/04/2026)***

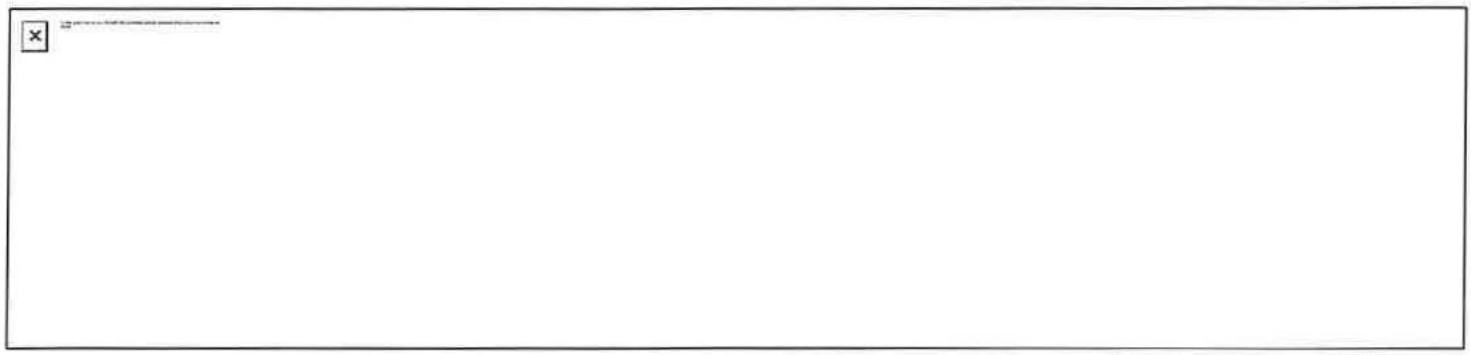
DCE Decision

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Powered by **Objective ECM** .

Farley, Lisa (PIRSA)

From:	Objective Administrator <pirsa.darms@sa.gov.au>
Sent:	Thursday, 28 May 2026 8:20 AM
To:	Harvey, Adrian (PIRSA)
Subject:	A7523297 Minute from PIRSA to Minister Scriven - Varroa treatment resistance update 260526 (A7523297) - Workflow Task Ready: Notification: Briefing has been approved by the Manager
Attachments:	Attached file: A7523297 Minute from PIRSA to Minister Scriven - Varroa treatment resistance update 260526.obr



Notification: Briefing has been approved by the Manager

Workflow: PIRSA Briefings Workflow

Slip: A7523297 Minute from PIRSA to Minister Scriven - Varroa treatment resistance update 260526

Task: **Notification: Briefing has been approved by the Manager**

Instructions:

Please be advised that this briefing has been approved by the Manager.

Previous task

for review & approval. AC 28.5.26

Crowther, Anne-Marie *(Actioned on 28/05/2026)*

Manager to review and approve briefing

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Powered by **Objective ECM** .

Farley, Lisa (PIRSA)

From:	Objective Administrator <pirsa.darms@sa.gov.au>
Sent:	Friday, 29 May 2026 2:14 PM
To:	Harvey, Adrian (PIRSA)
Subject:	A7523297 Minute from PIRSA to Minister Scriven - Varroa treatment resistance update 260526 (A7523297) - Workflow Task Ready: Notification: Briefing has been approved or Noted by the Minister
Attachments:	Attached file: A7523297 Minute from PIRSA to Minister Scriven - Varroa treatment resistance update 260526.obr

Notification: Briefing has been approved or Noted by the Minister

---

Workflow: PIRSA Briefings Workflow

Slip: A7523297 Minute from PIRSA to Minister Scriven - Varroa treatment resistance update 260526

Task: **Notification: Briefing has been approved or Noted by the Minister**

Instructions:

Please be advised that this approved or noted briefing has been returned by the Minister's Office.

Previous task

Rothe, James *(Actioned on 29/05/2026)*

Briefing received from PIRSA for noting or approval - Minister PIRD & FI

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Powered by **Objective ECM** .

Important Notice Sign up to AHBIC Newsletters and Updates REGISTER HERE

News

AHBIC Biosecurity Update – Incursion of Resistant Varroa Mite – 23 April 2026

23 APRIL 2026

Related articles

AHBIC Chair Report August 2026
24 AUGUST 2026

Seasonal Outlook With spring just around the corner and pollination

23rd April 2026 Second Varroa Mite Incursion Confirmed NSW DPIRD have confirmed that the resistant mite populations detected in QLD and NSW are a new population of mites un-related to [...]



23rd April 2026

Second Varroa Mite Incursion Confirmed

NSW DPIRD have confirmed that the resistant mite populations detected in QLD and NSW are a new population of mites un-related to the original 2022

season well underway, its go time for beekeepers. My understanding... **Read More**

New Research, Development and Extension Plan for the Honeybee Industry

24 AUGUST 2026

2026 – 2031 The AgriFutures Honey Bee & Pollination Program invests in research, development and extension (RD&E) that improves the... **Read More**

AFB – Bee Informed, from our WA Bee Biosecurity Officer: Shannon Holt

24 AUGUST 2026

Spring build-up...or hidden trouble? Article by Shannon Holt,

detection. This new population of mites has confirmed genetic resistance to both pyrethroid and amitraz-based treatments. Further work is being undertaken to determine how these mites arrived in Australia and how far they have spread.

So far, the hives tested have not shown presence of any new exotic viruses. However, further genetic analysis of the endemic virus AR1 (aka *rhabdovirus*) found with these mites, confirms it is an exotic strain and different in origin to the existing endemic AR1 virus associated with the Newcastle original population.

The Consultative Committee on Emergency Plant Pests (CCEPP), drawing on NSW DPIRD tracing and laboratory testing, has verified that this resistant population is present across Queensland and New South Wales. Tracing and subsequent lab testing has also identified that the first mites detected in South Australia's Riverland to be part of the new population but is not considered to be established.

The CCEPP members agreed that the new incursion of resistant mite populations cannot be eradicated due to a lack of containment and the unknown entry pathway.

Resistant Mites will Spread

Resistant mites appear to be spreading through the trade and movement of live bees and colonies as well as proximity to affected apiaries in both NSW and QLD. The resistance has been recorded across NSW and southern QLD, additional areas are likely to be impacted.

Bee Biosecurity Officer DPIRD WA
Spring is one of the busiest times in the... **Read More**

These miticide resistant varroa mites will eventually become widespread, meaning beekeepers will eventually have lower efficacy from key synthetic control tools, and there will become an increased risk of high mite loads and colony losses across Australia.

The messaging remains consistent from the start of the incursion, it is more important than ever to ROTATE modes of action, and MONITOR mite numbers before, during and after miticide treatments. If you suspect that pyrethroid or amitraz resistance-carrying mites are in your apiaries or in your area, you should not use amitraz or pyrethroid products where possible. Instead use organic acid-based products as there is no known resistance.

.. you are already treating with synthetics and suspect resistance, then act ..viftly to test your colonies via state Bee Biosecurity Officer assistance or ·ivatised testing facilities. Confirmed synthetic treatment failures will require ıanging management practices including integrated pest management and using only organically derived treatments to give your colonies the best chance of survival.

Taking Care of Yourself and your Mates

We acknowledge that these ongoing challenges for our industry can be incredibly difficult to navigate. We encourage you to reach out to available resources for professional support if you feel you need it.

- Lifeline, 13 11 14
- Rural Aid (Mon to Fri 9am – 5pm), 1300 175 594

- Rural Financial Counselling Services
- Black Dog Institute
- Beyond Blue, 1300 22 46 36

CLICK HERE TO OPEN THIS UPDATE IN PDF

Refer to the **AHBIC Varroa Chemical Treatment Table** for a quick guide to modes of action and better treatment understanding.



Bianca Giggins

Industry Development Manager

0402 467 780

bianca@honeybee.org.au

AHBIC, its employees, executive and consultants expressly disclaim all and any liability to any person in respect of anything, and the consequences of anything, done or omitted to be done in reliance, whether wholly, partly, upon the whole or any part of the contents of this industry update document.

< PREVIOUS STORY

AHBIC Biosecurity Update – Resistant Varroa Mite – 10 April 2026

NEXT STORY >

AHBIC Biosecurity Update – Resistant Varroa Mite – 18 June 2026

Sign up to our monthly newsletter and receive the latest industry news to your inbox.

SIGN UP

Our Value Proposition

Secure, sustainable, and prosperous honeybee and pollination industries, vital to agriculture, food security and community well-being.

Connect with us

Become a friend

Become a friend of AHBIC, and make a voluntary contribution.

Copyright © 2026 Australian Honey Bee Industry Council. All rights reserved. ABN: 63 939 614 424. **Privacy Policy** | **Terms of Use**

By MadeKnown

Farley, Lisa (PIRSA)

From: ahbic@honeybee.org.au on behalf of AHBIC <ahbic@honeybee.org.au>
Sent: Thursday, 23 April 2026 9:15 PM
To: Harvey, Adrian (PIRSA)
Subject: AHBIC Biosecurity Update - Incursion of Resistant Varroa Mite - 23 April 2026

Australian Honey Bee Industry Council View in browser

Dear Adrian Harvey,

Please note, we have an Important AHBIC Biosecurity Update, regarding a new incursion of varroa mites in Australia. See below link to open further details:

AHBIC Biosecurity Update - Incursion of Resistant Varroa Mite - 23 April 2026

Kind regards

The Team at AHBIC

Australian Honey Bee Industry Council
5 John St
Ardrossan, SA, 5571
Email: ahbic@honeybee.org.au
www.honeybee.org.au

Connect with us

Unsubscribe

This message is intended for the addressee named above. It may also be confidential, privileged and/or subject to copyright. Whilst all care has been taken, the sender disclaims all liability for loss or damage to person or property arising from this message being infected by computer virus or other contamination.

Farley, Lisa (PIRSA)

From: Department of Primary Industries and Regions (PIRSA) <PIRSA.beebiosecurity@sa.gov.au>
Sent: Friday, 22 May 2026 1:24 PM
To: Harvey, Adrian (PIRSA)
Subject: Biosecurity Notice - Varroa detection update, 22 May 2026

View this email in your browser

22 May 2026

Biosecurity Notice

You are receiving this email as you are registered or have recently been registered with the Department of Primary Industries and Regions (PIRSA) as a beekeeper.

Varroa mite detection update

Varroa mite detections continue to be reported to PIRSA. Hive inspection results submitted contribute to the Varroa Surveillance Map.

Presently there are 78 confirmed apiaries involving 62 beekeepers with positive varroa detections across 21 Local Government Areas (LGAs).

Since the last Biosecurity notice on 16 April 2026, PIRSA have been notified of additional detections at the following locations:

- Upper North - Beetaloo Valley
- Mid Murray - Walker Flat
- Riverland - Taylorville, Pooginook
- Upper Limestone Coast - Meningie
- Lower Limestone Coast - Nangwarry, Dismal Swamp, Worrolong

- Adelaide Hills – Kersbrook, Forreston, Lobethal
- Yorke Peninsula - Warooka
- Southern Flinders - Melrose
- Eyre Peninsula - Sheringa, Tooligie

Varroa treatment resistance

In early May, Agriculture Victoria notified states and territories of it's first detection of synthetic pyrethroid resistance. Treatment resistance to both the synthetic pyrethroid and amitraz products is believed to be extensive across southern QLD and NSW (AHBIC Industry Biosecurity Update, 23 April 2026). **It is important to note that treatment resistance has not yet been reported in South Australia.**

The resistance mutant 'L925I' significantly reduces the efficacy of synthetic pyrethroids. The presence of this synthetic pyrethroid resistance has been confirmed by Ag Vic who are currently assessing its extent.

Treatment resistance investigations in Queensland and NSW

Analysis of varroa mite samples involved in treatment resistance to both products indicates the presence of two distinct lineages of Apis mellifera rhabdovirus-1 (AMR-1) which are circulating among Australian *Varroa destructor* populations. AMR-1 Lineage 1 is associated with the original varroa incursion detected in Australia in 2022.

Traceback investigations linked to recent detections of amitraz resistance in Queensland and New South Wales have identified a potential epidemiological connection to South Australia, specifically relating to the initial detection at Pooginook in September 2025, which is not believed to have established in SA.

As part of this investigation, South Australia provided samples to New South Wales to support national traceability efforts. Testing of these samples identified AMR-1 Lineage 2, consistent with the resistant strain and suggests a probable second incursion of Varroa destructor into Australia. This matter remains under active investigation by NSW authorities.

On-going efforts in South Australia and treatment options

Ongoing monitoring of sentinel hives at Pooginook has not detected Varroa destructor to date. South Australia remains confident that varroa mites, including the resistant strain, did not establish in the state. This confidence is underpinned by the rapid removal of all affected hives from South Australia in September 2025, combined with continued sentinel hive surveillance, broader general surveillance activities, and comprehensive traceback investigations conducted since that time. No residual mites have been detected through these surveillance measures, providing strong evidence that establishment has not occurred

As treatment resistance has not yet been reported in South Australia, both amitraz and synthetic pyrethroids are still effective treatment options and should be considered as part of an IPM plan. If you observe any treatment failure or reduced effectiveness, please contact PIRSA so that we can obtain samples for resistance testing.

Monitoring via sticky mats or washes at pre, mid and post treatment intervals can aid in assessing effectiveness of treatments. Rotating modes of action will also help in managing resistance.

If you observe ineffective treatments, please contact PIRSA and we will assist with sample gathering for resistance testing.

Beekeeper registration - price increase from 1 July 2026

Registration is a legal requirement for all beekeepers.

From 1 July 2026, the registration fee for beekeepers with five or more hives will increase slightly from $52.50 to $54.00.

There is no change to the Hive Contribution Fee, which remains at $1 per hive.

Beekeepers with 1-4 hives are not required to pay a registration or hive contribution fee.

To make registration and renewal as easy as possible, both online and printable/hardcopy formats are available.

If renewing online, you will need to create a myPIRSA account. I you already have one, just login and add beekeeper registration as a service to your existing account.

Your myPIRSA account will allow you to easily manage update and your contact details, renewals, transfers and cancellations.

Events and learning opportunities

All face-to-face events and online webinars are listed on the PIRSA Eventbrite page. By registering with Eventbrite, you will receive notifications about upcoming sessions.

Our last webinar was attended by over 145 beekeepers, highlighting the strong interest across the industry.

Josh will be visiting Warooka on the Yorke Peninsula on Friday 5th June for the

AGRI breakfast. Please register via the Eventbrite below if you would like to attend.

Yorke Peninsula AGRI. Breakfast and Beekeeper Meet-Up Tickets, Friday, June 5 • 8 AM - 9:30 AM | Eventbrite

If you're seeking general information, want to refresh your knowledge or are looking for more technical detail on a subject, please visit www.varroa.org.au

Upcoming events:

How to report suspected varroa mites

If you detect or suspect varroa mite in your hives:

Email: PIRSA.beebiosecurity@sa.gov.au

Or call the **Exotic Plant Pest Hotline 1800 084 881**

PIRSA Varroa contacts

PIRSA Biosecurity - Apiary Unit
Phone: **(08) 8207 7900** (PIRSA Glenside)
Email: PIRSA.beebiosecurity@sa.gov.au

Varroa Development Officer
Josh D'Ambrosio

Mon – Fri
Phone: Clause 6(1)
Email: joshua.d'ambrosio@sa.gov.au

Bee Biosecurity Officer
Davide Stella
Phone: Clause 6(1)
Email: davide.stella@sa.gov.au

FaB Mentors

The Family and Business (FaB) Mentors provide free independent, and confidential support to primary producers, including beekeepers, across South Australia. FaB Mentors offer a listening ear and can connect you with a range of assistance options, such as financial counselling, emotional wellbeing services and government support services. Whether you are facing industry challenges, adverse weather conditions or market fluctuations, FaB Mentors can help you navigate available resources.

The FaB team has a diverse variety of business and agricultural backgrounds. Contact any of the mentors and they will link you to the most appropriate assistance.

See here for further information and contact details.

Missed a Biosecurity Notice?

If you have missed a biosecurity notice, all past and current notices are available to view on the PIRSA Varroa webpage, under the *Response in South Australia*

section, in the *Industry Updates and Information* drop down box.

Do you know someone who keeps bees and may need a reminder to register?

By law, all beekeepers must be registered to keep bees and maintain hives.

Any person keeping honey bees, whether it's a single backyard hive or a commercial operation, must register annually.

Registration enables PIRSA to contact you with urgent biosecurity alerts (e.g. varroa mite), supports industry protection by tracking pests and diseases and provides access to VDO supports, educational materials and workshops.

Encourage them to register if they have not already by signing up through our website today.

Are your details up to date?

As a registered beekeeper, you receive the latest information on training events and opportunities including any biosecurity concerns for the apiary industry.

If you have changed your address or any other contact details, you need to notify PIRSA by completing the change of ownership or address form and emailing it to PIRSA.picregistrations@sa.gov.au

More information

- PIRSA
- National Varroa mite Management Program

- Australian Honey Bee Industry Council (AHBIC)
- Australian Government

Do you know a beekeeper who doesn't receive these updates? Encourage them to register if they have not already, and sign up through our website.





This email was sent to Adrian.Harvey@sa.gov.au

Why did I get this? · Unsubscribe from this list · Update subscription preferences · Share the newsletter
Primary Industries and Regions SA · 11 Waymouth Street · Adelaide, SA 5000 · Australia

Security Classification: 01 Public



Doc 2

PIRSA Apiary Unit update prepared for South Australian Apiarists Association (SAAA) Executive meeting on 01 May 2026.

Compiled by Adrian Harvey, acting Manager, Apiary Program, 30 April 2026.

Out of scope

Varroa Treatment Resistance in NSW and QLD

NSW Department of Primary Industries and Regional Development (DPIRD) confirmed 16/02 the first case of Varroa mite pyrethroid resistance in the state. Laboratory testing at the Elizabeth Macarthur Agricultural Institute (EMAI) identified a known genetic mutation, L925I, which causes pyrethroid resistance in Varroa mites.

There are two approved pyrethroid miticide active ingredients available in Australia, flumethrin and tau-fluvalinate (sold as Bayvarol and Apistan).

In mid-April NSW confirmed varroa populations with Amitraz (Apivar and Apitraz) resistance in association with this testing they also confirmed a second varroa incursion in Australia. This detection has been made through examining *Apis mellifera rhabdovirus* 1 (AMR1; also referred to as ARV1) which is a varroa mite-associated rhabdovirus with transmission closely linked to the reproductive biology of *varroa destructor*. The testing revealed that there are two lineages of the AMR1 virus circulating among Australian varroa mites.

The AMR1 Lineage 1 strain identified in samples from the initial 2022 incursion, as well as more recent samples mainly from neighbouring regions clusters most closely with sequences from Eastern Europe and the Swedish island of Gotland, regions with known historical connectivity in Varroa destructor populations. In contrast, the AMR1 variant (identified as Lineage 2). associated with miticide-resistant mites collected in Qld, NSW and SA forms a distinct well-separated clade containing a closely related Belgian sequence with next closest relatives being of USA origin

Adrian Harvey
Email: adrian.harvey@sa.gov.au
Phone: Clause 6(1)
pir.sa.gov.au

The SA link comes via hives from QLD and associated with initial detection at Pooginook in Sept 2025. These hives were subsequently directed out of SA to Forbes, NSW. The subsequent surveillance of beekeepers within 25km, feral colonies and the installation of sentinel hives provides the confidence that this population of varroa did not establish in SA.

Distribution of resistant mites is now considered widespread across NSW and southern QLD

As with all treatments, beekeepers are reminded to check mite loads pre, mid and post treatment to monitor treatment efficacy and the potential occurrence of resistant mites in your apiaries.

SA beekeepers are still encouraged to utilise all available treatments and management tools in developing a management plan. If they observe low effectiveness of treatments or complete failure, we ask them to contact the PIRSA Apiary Unit via pirsa.beebiosecurity@sa.gov.au. We will assist in investigating and testing to identify the cause.

AHBIC Biosecurity Update AHBIC-Biosecurity-Update-29-April-2026.pdf

Out of scope



Legislative requirements for varroa and apiary commodity movement

- Varroa is being proposed to move from an exotic notifiable (excluded from entry) to the notifiable report only (entry with conditions) category. Minuet is currently before the Minister
- The gazette and it associated conditions are being updated to allow commodities including colonies with managed varroa at or below seasonal threshold to enter SA.
- Both online and printable versions of documents i.e. movement applications, health certificates and permit templates are all being updated.
- During 2025, 13 permits covering 5898 queens were approved, during 2026 to date, 27 permits have been issued for 8754 queens and approved for entry.

Government of South Australia
Department of Primary Industries and Regions

Minute to
Minister for Primary Industries and Regional Development
Minister for Forest Industries

Ref: A7474002

For	**Noting**
Critical Date	Routine
Subject	**Varroa treatment resistance and link to SA**

Synopsis

This minute provides awareness of varroa treatment resistance currently occurring in an isolated region of QLD and NSW and a link to SA's initial varroa detection at Pooginook in September 2025.

Recommendations

That you:

1. Note the brief

NOTED

.....

Hon Clare Scriven MLC

Minister for Primary Industries and Regional Development

Minister for Forest Industries

/ / 2026

Ministerial Comments -

Background

- Varroa mite, the most serious biosecurity threat to Australia's honey bee industry, was detected at the Port of Newcastle on 22 June 2022 through routine surveillance
- A national eradication response was implemented from June 2022 to September 2023, when the response moved to a national transition to management program focussing on beekeeper and industry preparedness, which has since concluded on 6 Feb 2026.
- Varroa mite is considered established in Australia with varroa occurring in New South Wales, Victoria, Queensland, ACT and South Australia.
- The first South Australian detection of varroa mite occurred at Pooginook in the Riverland on 2 September 2025, linked to hives that had met entry requirements from Queensland; no further related detections were identified through tracing or surveillance.
- A separate detection was confirmed on 20 November 2025 near Clause 6(1) in the Limestone Coast.
- Tracing from the November 2025 detection has now expanded to identified 56 infected apiaries, involving 45 beekeepers across 18 local government areas.
- Varroa detections have occurred across multiple regions, including the Limestone Coast, Riverland, Adelaide Hills, Fleurieu and Yorke Peninsula, Mid North and Southern Flinders

Varroa Treatment resistance

- In January 2026 New South Wales Department of Primary Industries and Regional Development (NSW DPIRD) was alerted to a varroa treatment failure where the application of synthetic pyrethroids (Bayvarol/ Apistan) miticide failed to adequately suppress varroa mites at a location on the mid north coast of NSW
- NSW DPIRD Officers attended the site at Clause 6(1) to inspect the hives and collect samples. In collaboration with the beekeeper, they performed an efficacy test using additional bees brought in from an unrelated site with samples collected before and after the test. Diagnostics were conducted at EMAI by their chemical resistance team and resistance alleles to both synthetic pyrethroid and Amitraz based synthetic miticides (Apivar/Apitraz) was confirmed after several rounds of testing.
- A nearby site owned by the same beekeeper also observed hive losses and treatment failure following application of miticide in January 2026, this site also tested positive for miticide resistance.
- This outcome triggered an investigation by NSW DPIRD.
- *Apis mellifera rhabdovirus* 1 (AMR1; also referred to as ARV1) is a varroa mite-associated rhabdovirus with transmission closely linked to the reproductive biology of *varroa destructor* which makes AMR1 a useful marker for investigating the population structure and potential geographic origins of varroa mite incursions.
- Genetic testing is showing that this latest detection has a separate distinct *Apis mellifera rhabdovirus (AMR1)* lineage and so is considered a separate introduction into Australia. 27 samples out of 72 Lineage 2 samples tested have now tested positive to resistance.

South Australian connection

- SA has a connection to this new lineage, AMR1 Lineage 2, through the original detection that was made in the SA Riverland (Pooginook) in September 2025, which we are comfortable did not become established.
- Those hives entered SA on 24/7/25, mites were detected on 02/09/25 and hives were sent out of the State on 09/09/25 to a location at Clause 6(1)
- Those Qld hives that went to SA and were then directed out of SA into NSW have now tested positive for Lineage 2 but have not yet been confirmed as having insecticide resistance.
- NSW is currently collecting mites from these loads which are in NSW and having them tested for resistance. The mite wash numbers on these loads look suspicious, but NSW need to confirm, and the results are pending.
- PIRSA is confident the Pooginook detection did not establish in SA, based on surveillance of beekeepers and feral bee colonies within 25km of the detection and the installation of sentinel hives at the site where the QLD hives were located not finding any evidence of mites. Testing was taken out to 60-days without establishment.
- SA's current mite population is likely Lineage 1 (NSW 2022) and is susceptible to treatments. PIRSA has not received reports of non-effective varroa treatments using the synthetic pyrethroid product, Bayvarol.
- On 16 April, the Consultative Committee for Emergency Plant Pests (CCEPP) members agreed the new detection represents an Emergency Plant Pest (a variant form of an established pest), and that it is not Technically Feasible to eradicate this new variant from Australia.

Discussion

- NSW and QLD are investigating the extent of the treatment resistance; it is however expected to spread through varroa populations as beekeepers undertake routine operations and movements.
- As miticide resistance in varroa mites becomes widespread, apiarists will lose key control tools, and there becomes an increased risk of high mite loads and colony losses. This is tempered by the knowledge that there still exists alternate physical and chemical treatment options to manage Varroa.
- AHIBIC the national apiary representative body, continue to lobby and encourage manufacturers to apply to the APVMA for permit and registration of additional varroa treatment products e.g. Norroa and mixes of formic and oxalic acids.
- PIRSA is collecting and providing additional samples for resistance testing, particularly from the sentinel hives on the Pooginook site and beekeepers that had hives within 25km.
- National talking points on the have been updated to reflect treatment resistance. Key messaging includes.
    - Resistance is being observed in isolated areas of SE QLD and NE NSW and only affecting a few beekeeping operations.
    - Implementing best practice chemical management by rotating to a different mode of action for each treatment

  - The synthetic pyrethroids (Bayvarol/Apistan) and Amitraz (Apitraz/Apivar) products are still being used with effect in QLD & NSW, Vic and SA and should still be considered as a treatment option as a part of an integrated pest management plan.
  - Monitoring pre, mid and post treatment for effectives and reporting non effective treatments to your state agency.

- SAVIAC initially discussed the resistance issue at meeting on 18th Feb 2026 following the January report of synthetic pyrethroid resistance and intend to highlight and further discuss the issue and national actions at its next meeting 6 May 2026
- PIRSA recently received grant funding from the Thriving Regions fund to secure additional suite of acaracide treatments, both synthetic and organic options treatment product are expected to be received late April – mid May. The grant funding also supports the ongoing provision of varroa management advice though our Varroa Development Officers (VDO).

Stakeholder / regional impacts, consultation and engagement

- Beekeepers are supported through regular updates, a surveillance heat map based on voluntary reporting, and ongoing online and face to face engagement led by PIRSA's Apiary Unit.
- Apiary Unit VDO continue to deliver monthly webinar update which are keenly received by SA beekeepers, e.g. recent webinar on 15 Apr 2026, had 118 beekeepers in attendance
- PIRSA continue to issue monthly Biosecurity Notice last issued on 16 Apr 2026 that included details of varroa resistance and links to jurisdictional (QLD/NSW and industry AHBIC media releases, with next notice scheduled for 21 May 2026
- CCEPP has updated the National Talking Points

Management of key risks

- Beekeepers are being encouraged to implement best practice management in relation to the use of acaricide treatments i.e. not to use same product back to back, ensure the mode of action is changed for each treatment and monitoring treatment effectiveness and report any treatment failures.

Legislative and/or financial implications

- None



for
CHIEF EXECUTIVE
Department of Primary Industries and Regions

27/04/2026

CONTACT	Georgie Cornish
POSITION	Executive Director
DIVISION	Biosecurity
MOBILE and LANDLINE	Clause 6(1) and 08 8429 2743
Cleared by	Con Poulos, Director Animal Biosecurity

Farley, Lisa (PIRSA)

From: Chris Anderson <chris.anderson@dpird.nsw.gov.au>
Sent: Thursday, 16 April 2026 12:36 PM
To: Harvey, Adrian (PIRSA)
Cc: Secomb, Nick (PIRSA); Poulos, Con (PIRSA); Fielder, Kate (PIRSA)
Subject: Re: VM lineage 2 confirmation

G'day Adrian,

yes the Qld hives that went to SA and were then directed out of SA into NSW (thanks very much 😂) tested positive for Lineage 2. So that was your first detection as discussed on the phone.

We are currently collecting mites from these loads in NSW and having them tested for resistance. The mite wash numbers on these loads look suspicious, but we need to confirm and the results are pending.

The statement about not establishing is based on your running sentinels at the site where the hives were in SA and not finding any evidence of mites. So it seems that your mite population in SA is probably Lineage 1 (NSW 2022) and is susceptible to treatments. We are happy to test more samples for you.

Chris

From: Harvey, Adrian (PIRSA) <Adrian.Harvey@sa.gov.au>
Sent: Thursday, 16 April 2026 12:43 PM
To: Chris Anderson <chris.anderson@dpird.nsw.gov.au>
Cc: Secomb, Nick (PIRSA) <Nick.Secomb@sa.gov.au>; Poulos, Con (PIRSA) <Con.Poulos@sa.gov.au>; Fielder, Kate (PIRSA) <Kate.Fielder@sa.gov.au>
Subject: VM lineage 2 confirmation

OFFICIAL

Hi Chris
Just reviewing the documents for CCEPP
The NSW supporting info doc – says pending for SA in the conclusion and in the Decision, table indicates confirmed,
But also see the Note: The South Australian detection likely did not establish as hives were promptly removed from South Australia and ongoing sentinel surveillance has not detected residual mites in the area.

I'd like to get some comms out about this inline with the NTP's, just so our beekeepers are aware and prompt them to monitor and report anything unusual
Regards

Adrian Harvey | Program Manager – Apiary Unit
Biosecurity | **Department of Primary Industries and Regions**
Government of South Australia

135 Gordon Street, Naracoorte SA 5271

PO Box 618, Naracoorte SA 5271

P: +61 8 7085 1778 | **M:** Clause 6(1) | **E:** adrian.harvey@sa.gov.au
pir.sa.gov.au

Please direct apiary enquires to: pirsa.beebiosecurity@sa.gov.au

The Department of Primary Industries and Regions respects Aboriginal people as the state's first people and nations. We recognise Aboriginal people as traditional owners and occupants of South Australian land and waters. We pay our respects to Aboriginal cultures and to Elders past, present and emerging.

Disclaimer: The information in this email may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Farley, Lisa (PIRSA)

From: Stella, Davide (PIRSA)
Sent: Thursday, 23 April 2026 9:05 PM
To: Harvey, Adrian (PIRSA); Stedman, Michael (PIRSA); D'Ambrosio, Joshua (PIRSA)
Subject: AHBIC article on chemical resistance 23 April 2026

OFFICIAL

Hello gents,

This is worth a read:
https://honeybee.org.au/ahbic-biosecurity-update-resistant-varroa-mite-23-april-2026/?fbclid=Iwb21leARW4VNjbGNrBFbclmV4dG4DYWVtAjExAHNydGMGYXBwX2lkDDM1MDY4NTUzMTcyOAABHqKYtvTQcn5f8OStS4ZCkiXB704P7eHiqpq6F1MPqNZ591HLL4K1CatsrneX_aem_xcbh4qelyBLVk1EjlZGa2g

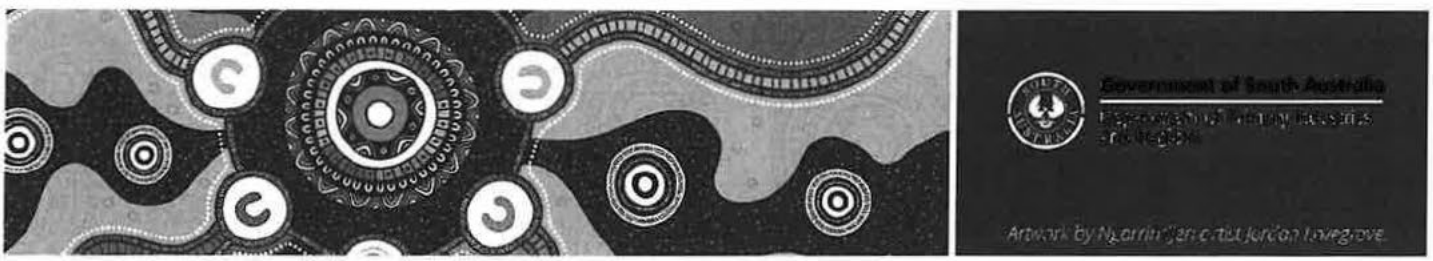
I'm bracing for comments regarding the part of the article that states:

"Tracing and subsequent lab testing has also identified that the first mites detected in South Australia's Riverland to be part of the new population but is not considered to be established".

Have a good evening,

DAVIDE STELLA | Bee Biosecurity Officer
Biosecurity Division | **Department of Primary Industries and Regions**
Government of South Australia | GPO Box 1671 Adelaide SA 5001
T: +61 8 8207 7900 | **M:** Clause 6(1) | **E:** davide.stella@sa.gov.au

*For general BBO or VDO enquiries, please email: PIRSA.beebiosecurity@sa.gov.au



The Department of Primary Industries and Regions respects Aboriginal people as the state's first people and nations.
We recognise Aboriginal people as traditional owners and occupants of South Australian land and waters.
We pay our respects to Aboriginal cultures and to Elders past, present and emerging.

Disclaimer: The information in this email may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Farley, Lisa (PIRSA)

From:	Stedman, Michael (PIRSA)
Sent:	Monday, 25 May 2026 5:34 PM
To:	Harvey, Adrian (PIRSA)
Subject:	Varroa resistance details for CCEPP
Attachments:	Info to date re SA acaracide resistance - details for QLD generated heat map for CCEPP.docx

OFFICIAL

CCEPP has asked NSW to provide a map of resistant locations across Australia and QLD is plotting this using the format below. I believe they want SA details asap.

Are you happy with the info below, and do we need to first (i) seek confirmation that names and precise locations will not be made public – the list has some 60 + beekeepers details, and (ii) advise SA industry etc first.

Regards,

Michael Stedman | Program Co-ordinator, Apiaries
Department of Primary Industries and Regions
Government of South Australia | 33 Flemington Street, GLENSIDE SA 5065
P: +61 8 8429 0872 | **M:** Clause 6(1) | **E:** michael.stedman@sa.gov.au
pir.sa.gov.au





Government of South Australia
Department of Primary Industries and Regions

Service I Professionalism I Trust I Respect I Collaboration & Engagement I Honesty & Integrity I Courage & Tenacity I Sustainability

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Farley, Lisa (PIRSA)

From: Chris Anderson <chris.anderson@dpird.nsw.gov.au>
Sent: Thursday, 28 May 2026 9:17 AM
To: Harvey, Adrian (PIRSA)
Subject: Re: Varroa samples to NSW DPIRD from SA - acaracide resistance testing - to DN 1

Ahh yes. They are positive for dual resistance and North America strain virus.

Chris

From: Harvey, Adrian (PIRSA) <Adrian.Harvey@sa.gov.au>
Sent: Thursday, 28 May 2026 9:44 AM
To: Chris Anderson <chris.anderson@dpird.nsw.gov.au>
Subject: RE: Varroa samples to NSW DPIRD from SA - acaracide resistance testing - to DN 1

OFFICIAL

Was referring to the retest DPRID where doing back in mid April with Clause 6(1)

Adrian Harvey
Program Manager – Apiary Unit | Biosecurity
Department of Primary Industries and Regions
P: +61 8 7085 1778 | **M:** Clause 6(1) | **E:** adrian.harvey@sa.gov.au
pir.sa.gov.au

Please direct apiary enquiries to: pirsa.beebiosecurity@sa.gov.au

---

From: Chris Anderson <chris.anderson@dpird.nsw.gov.au>
Sent: Wednesday, 27 May 2026 5:08 PM
To: Harvey, Adrian (PIRSA) <Adrian.Harvey@sa.gov.au>
Subject: Fw: Varroa samples to NSW DPIRD from SA - acaracide resistance testing - to DN 1

FYI I assumed you also got it.

Get Outlook for iOS

From: Duong Nguyen <duong.nguyen@dpird.nsw.gov.au>
Sent: Friday, May 22, 2026 4:27 pm
To: Chris Anderson <chris.anderson@dpird.nsw.gov.au>; Shannon Mulholland <shannon.mulholland@dpird.nsw.gov.au>; DPIRD CPPO LabResults Mailbox <cppo.labresults@dpird.nsw.gov.au>
Cc: Daniel Martin <daniel.martin@dpird.nsw.gov.au>; Harvey Howard

<harvey.howard@dpird.nsw.gov.au>
Subject: Fw: Varroa samples to NSW DPIRD from SA - acaracide resistance testing - to DN 1

Dear Chris and Team,

Michael sent us samples for resistance testing. As you may recall, Chris, he enquired back in March about beekeepers' concerns around Bayvarol resistance in SA.

Attached are the resistance report and submission form that I received from him just before the NSW bee conference last week.

Please let me know if it's okay to send this report to him.

Best regards,
Duong

Dr Duong Nguyen
Research Scientist | Leader - Insecticide Resistance and Genomics
Plant Biosecurity Research & Diagnostics | Agriculture and Biosecurity
Department of Primary Industries
and Regional Development

T 02 4640 6389 **M** Clause 6(1) **E** duong.nguyen@dpird.nsw.gov.au
Google Scholar ORCID

nsw.gov.au/dpird

Elizabeth Macarthur Agricultural Institute
Woodbridge Road, Menangle NSW 2568

Department of Primary Industries and Regional Development

We stand on Country that always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

From: Stedman, Michael (PIRSA) <Michael.Stedman@sa.gov.au>
Sent: Monday, May 11, 2026 2:38 PM

To: Duong Nguyen <duong.nguyen@dpird.nsw.gov.au>
Subject: Varroa samples to NSW DPIRD from SA - acaracide resistance testing - to DN 1

OFFICIAL

Hi Dr Nguyen, please find attached documentation for varroa samples from SA sent for acaracide resistance testing (both combined synthetic pyrethroid and amitraz resistance profiles).

We also have several queries for testing from individual beekeepers in SA. Can you advise:

- Cost per sample,
- Turn around time,
- Whether you are accepting samples from individuals, and whether you have a form for them, and require payment up front

Regards,

Michael Stedman | Program Co-ordinator, Apiaries
Department of Primary Industries and Regions
Government of South Australia | 33 Flemington Street, GLENSIDE SA 5065
P: +61 8 8429 0872 | **M:** Clause 6(1) | **E:** michael.stedman@sa.gov.au
pir.sa.gov.au

Government of South Australia
Department of Primary Industries and Regions

Service | Professionalism | Trust | Respect | Collaboration & Engagement | Honesty & Integrity | Courage & Tenacity | Sustainability

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Department of Primary Industries
and Regional Development

UNCONTROLLED DOCUMENT

Procedure

PRIMARY INDUSTRIES
Elizabeth Macarthur Agricultural Institute
Woodbridge Rd, Menangle NSW 2568
T: 02 4640 6333 e: emai office@dpi.nsw.gov.au

SAMPLING OF VARROA MITES FOR MOLECULAR STUDY

NUMBER MCOP VMSample01 VERSION 2

AUTHORISED BY Entomologist

AUTHORISED DATE: 03/03/2026 EFFECTIVE DATE: 03/03/2026

ISSUED BY Primary Industries, EMAI: Entomology, Insecticide Resistance

Revision History

VERSION	DATE	AMENDMENTS	
		SECTION	DETAILS
2	3/03/2026	Sample information table	Updated with more details

Purpose

This document outlines the procedure for sampling Varroa mites (*Varroa destructor*) to detect miticide resistance via genomics.

Warnings

Before commencement of work, all users must ensure that they are familiar with relevant SDSs and Risk Assessments. Users are reminded of the need to follow safe work practice when applying any techniques described in this publication. This includes identifying, assessing and managing any occupational health and safety risks.

Contents

1. PRIOR KNOWLEDGE REQUIRED 2
2. RECOMMENDED STORAGE SOLUTION 2
3. PROCEDURE 2

1. PRIOR KNOWLEDGE REQUIRED

1.1 Current SDS's and SWMS for hazardous substances.

2. RECOMMENDED STORAGE SOLUTION

- Highly recommended: Ethyl alcohol, Pure (Catalog# E7023, Sigma-Aldrich)
- Accepted: Ethanol for analysis (Catalog# 1.03771, Sigma-Aldrich).

3. PROCEDURE

1.1 Prepare the storage solution (100% analytical ethanol) before going to the field: Add 1 mL of ethanol into 1.5 ml tubes; 10 or 40 mL of ethanol into the falcon tubes (15 mL or 50 mL).

1.2 Collect at least 100 mites for one hive into the 1.5 ml ethanol tubes, 20-50 mites per tube. Mites should be collected from 3-5 hives within an apiary.

1.3 For long-term preservation, tubes with collected samples should be stored at -20C to prevent DNA degradation before dispatching to EMAI.

1.4 Place samples in tubes and pack them into a Ziplock bag. Clearly label the bag with the collection date, location, apiary name, and the collector's name. Complete the form below:

Department of Primary Industries and Regional Development

UNCONTROLLED DOCUMENT

EMAI: Miticide resistance testing request

Use this form to request miticide resistance testing by the **EMAI Entomology Insecticide Resistance & Genomics team** at the Elizabeth Macarthur Agricultural Institute (EMAI). This form is to be completed by the person requesting the service. Call 02 4640 6389 for advice on fees and sample packaging instructions.

Your Reference:

SUBMITTER DETAILS			
Full name	MICHAEL STEDMAN	ABN	
Business name	DEPT OF PRIMARY INDUSTRIES & REGIONS (PIRSA)		
Postal address	33 FLEMINGTON STREET GLENSIDE SA 5065		
Email address	michael.stedman@sa.gov.au		
Telephone		Mobile	Clause 6(1)
PROPERTY OWNER – *If different to above*			
First name		Last name	
Business name			
Postal address			
Email address			
Telephone		Mobile	
SAMPLE DETAILS – *(Attach a separate page with details if multiple samples are submitted)*			
Date collected	VARIOUS	Collectors Name	
Where	SOUTH AUSTRALIA	GPS coordinates	
What is the problem? Control failure(s) observed?			
MITE TREATMENT HISTORY *(helpful for result interpretation and post management strategy*			
Pyrethroids: Bayvarol®, Apistan® *(Provide name in the next column)*	N/A	When	From.....To.....

Department of Primary Industries and Regional Development

UNCONTROLLED DOCUMENT

	Treatment outcome/comments		
Amitraz: Apivar®, Apitraz® *(Provide name in the next column)*	N/A	When	From.....To.....
	Treatment outcome/comments		
Organics: Oxalic acid (Api-Bioxal®, Aluen CAP®), Formic Pro®, Apiguard® *(Provide name in the next column)*	N/A	When	From.....To.....
	Treatment outcome/comments		
SERVICE OPTIONS			
I would like to know the resistance status of the sample(s) – Tick box for YES		☑	
DECLARATION – I declare that I am authorised to request the service(s) above & have read and agree to the NSW DPIRD Laboratory Services Te Clause 6(1)			
Name		MICHAEL STEWMAN	
Signature		Date	11/05/2026
SUBMITTING THE FORM			
Please send the sample(s) with completed form to: **Dr. Duong Nguyen – Entomology Insecticide Resistance & Genomics** NSW Department of Primary Industries & Regional Development Elizabeth Macarthur Agriculture Institute Woodbridge Road, Menangle NSW 2568 **Email** – duong.nguyen@dpird.nsw.gov.au Office - 02 4640 6389 Mobile: Clause 6(1)			
LAB USE ONLY			
ENTO-code		New customer?	
Date samples received		Initial	
Total samples received		Sample condition	
Lab storage location		Sample submission recorded in G: Drive?	

Privacy notice: Information collected will not be given to any other third party except where required by law. All information provided will be held by the DPIRD

Biosecurity and Food Safety branch of NSW Department of Primary Industries and Regional Development and will be managed in accordance with provisions under the Privacy and Personal Information Protection Act 1998.

Department of Primary Industries and Regional Development

UNCONTROLLED DOCUMENT

Contact	Duong Nguyen
Position	Research Entomologist
Contact no.	02 4640 6389/Clause 6(1)

Varroa mite samples submitted to NSW DPIRD for acaracide resistance testing:

Date submitted: **11/05/2026**

Reporting identification No	Identifier	Combination option	Date	Result
Clause 6(1)	Clause 6(1)	No		
	Clause 6(1)	No		
	Clause 6(1)	Can combine if required		
	Clause 6(1)			
	Clause 6(1)	No		
	Clause 6(1)	Can combine if required		
	Clause 6(1)			
	Clause 6(1)			
	Surveillance R/Land	Can combine if required		
	Surveillance R/Land			
	Surveillance R/Land			

From:

Michael Stedman - Apiary Unit
Primary Industries and Regions, South Australia
33 Flemington Street
GLENSIDE, SA 5065
Phone: Clause 6(1)
Email: michael.stedman@sa.gov.au

To:

Dr. Duong Nguyen – Entomology Insecticide Resistance & Genomics
NSW Department of Primary Industries & Regional Development
Elizabeth Macarthur Agriculture Institute
Woodbridge Road,
MENANGLE, NSW 2568
Phone: Clause 6(1)
Email: duong.nguyen@dpird.nsw.gov.au

Farley, Lisa (PIRSA)

From: Wright, Joanna (PIRSA)
Sent: Friday, 29 May 2026 1:06 PM
To: Harvey, Adrian (PIRSA)
Cc: Poulos, Con (PIRSA); Secomb, Nick (PIRSA)
Subject: Biosecurity Notice - PIRSA is investigating potential resistance varroa in Riverland region

OFFICIAL

Hi Adrian,

I had to re-work the sentence highlighted as it was unclear.

Is this correct?

Jo Wright | Senior Communications Partner
Industry, Strategy and Partnerships | **Department of Primary Industries and Regions**
Government of South Australia | Level 21, 11 Waymouth St
GPO Box 1671 Adelaide SA 5001
M: Clause 6(1) | **E:** joanna.wright@sa.gov.au
pir.sa.gov.au

Part Time: Tues - Fri from 8am to 4pm



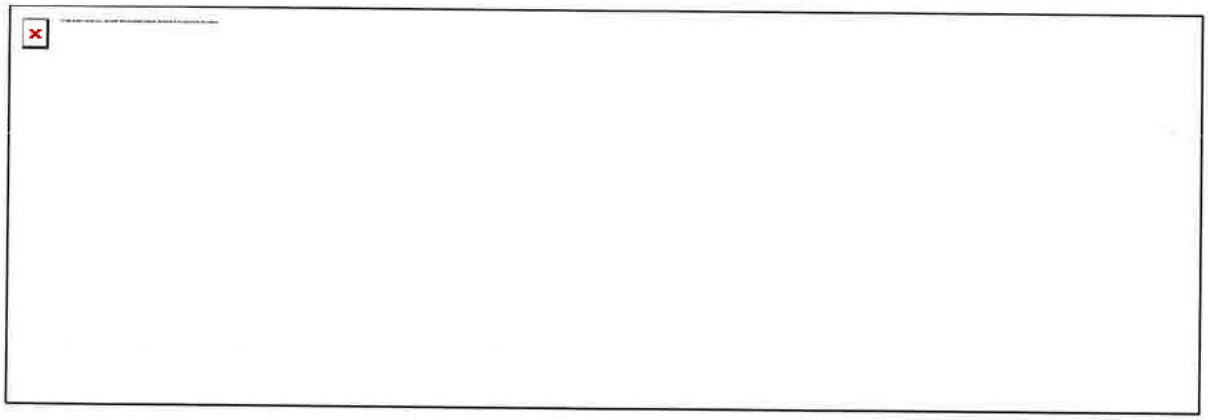
The Department of Primary Industries and Regions cares for the Country and communities of South Australia.
We ensure the land, sea, water and sky are healthy for future generations and strive to better understand their spiritual and cultural significance for Aboriginal people across the state.
In the spirit of reconciliation, our commitment is to build progressive and trusting relationships, to share knowledge and learn from each other.
We recognise and own a difficult past, and together we will walk forward. We acknowledge the many Aboriginal people of this Country as the oldest continuous living culture in the world.

Disclaimer: The information in this email may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

From: Department of Primary Industries and Regions (PIRSA) <PIRSA.beebiosecurity@sa.gov.au>
Sent: Friday, 29 May 2026 1:02 PM

To: Wright, Joanna (PIRSA) <joanna.wright@sa.gov.au>
Subject: [Test] Biosecurity Notice - PIRSA is investigating potential resistance varroa in Riverland region

View this email in your browser



1 June 2026

Biosecurity Notice

You are receiving this email as you are registered or have recently been registered with the Department of Primary Industries and Regions (PIRSA) as a beekeeper.

Resistance varroa mite detection update

Samples collected from the SA Riverland were supplied to the Elizabeth McArthur Agricultural Institute in NSW for analysis. On 22 May 2026 results indicated **positive for the presence of the genetic markers L925I/M and Y215H.** These are the known mutations that have been detected in chemically resistant varroa interstate and result in chemical resistance to synthetic pyrethroids (eg. Apistan/ Bayvarol), and formamidines (eg. Amitraz/ Apivar).

PIRSA is investigating the potential extent of resistant varroa in the Riverland region, and requests that beekeepers who have noted apparent synthetic pyrethroid or formamidine acaracide treatment failure (based on comparing varroa

mite counts via alcohol wash testing at treatment start-point - when treatment applied, treatment mid-point, and treatment end-point - when treatment removed), to contact the Apiary Unit.

Background:

Following the initial varroa mite detection at Pooginook on 2 Sept 2025, 44 catch boxes, and 38 bee baiting stations were installed, in addition to collection of samples from feral hives in the vicinity, no varroa mite was detected from these sources.

For longer term monitoring, 7 sentinel hive were installed and have continued to monitored every 6-8 weeks with varroa mite only recently being detected.

The monitoring of beekeepers within the 25km buffer also occurred with monitoring of several beekeepers within close proximity of the detection being monitored from the initial detection date and then at 30day intervals for the next 60days i.e. 2 monitoring cycles with no varroa being detected.

In mid-April 2026, the New South Wales Department of Primary Industries and Regional Development notified PIRSA that their tracing of the spread of acaracide resistance varroa in New South Wales and Queensland had revealed a link to SA's initial varroa incursion within the Pooginook Detection Zone in September 2025.

In response to this trace, and after repeat sampling, PIRSA collected mite samples from existing sentinel hives within the Pooginook Detection Zone, along with mites from a beekeeper with hives known to have been within this zone at the time of the initial detection. These samples have tested positive for the presence of the genetic markers L925I/M and Y215H.

Synthetic pyrethroid and formamidine acaracide resistance is becoming more widespread in southern Queensland and New South Wales, whilst in mid-May Victoria reported it was investigating the extent of its first detection of synthetic

pyrethroid resistance.

On-going management:

PIRSA continues to supply registered SA beekeepers who have notified the presence of varroa, and who are at threshold, with options of synthetic or organic acaracides.

Beekeeper actions:

With the potential for both varroa re-invasion and acaracide resistance, it is now more important than ever that beekeepers:

- regularly test their hives,
- only treat when at seasonal threshold,
- select, use and rotate between APVMA registered acaracides, following label/ permit directions,
- incorporate non-chemical treatments,
- keep records of test and treatment details, including identifying tested and treated hives, and
- report suspected resistance to the PIRSA Apiary Unit.

As in New South Wales and Queensland, both synthetic pyrethroid and formamidines based acaracides continue to remain very effective against the susceptible population (which in South Australia is likely virtually all of the varroa population, except for a few localised pockets), and should not be discounted in a rotation of treatment for the management of varroa mite.

Several options are available for both laboratory confirmation and in-field indications of synthetic pyrethroid and formamidine resistance, with one current in-field method being to compare varroa numbers via alcohol wash testing during treatment when using synthetic pyrethroid or formamidine based treatments, with

comparative testing undertaken at treatment start-point, treatment mid-point and treatment end-point.

PIRSA Varroa contacts

PIRSA Biosecurity - Apiary Unit
Phone: **(08) 8207 7900** (PIRSA Glenside)
Email: PIRSA.beebiosecurity@sa.gov.au

Varroa Development Officer
Josh D'Ambrosio
Mon – Fri
Phone: Clause 6(1)
Email: joshua.d'ambrosio@sa.gov.au

Bee Biosecurity Officer
Davide Stella
Phone: Clause 6(1)
Email: davide.stella@sa.gov.au

Program Coordinator, Apiaries
Michael Stedman
Phone: Clause 6(1)
Email: michael.stedman@sa.gov.au

Events and learning opportunities

All face-to-face events and online webinars are listed on the PIRSA Eventbrite page. By registering with Eventbrite, you will receive notifications about upcoming sessions.

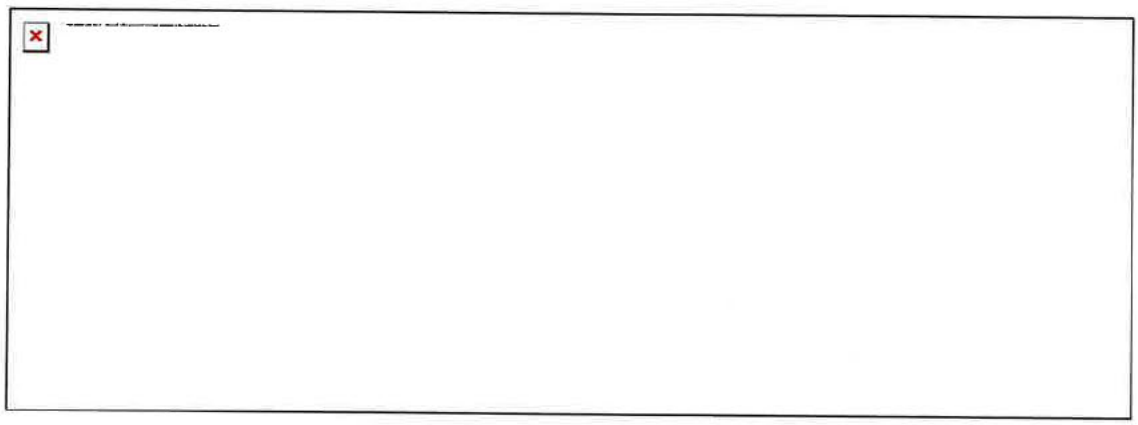
Our last webinar was attended by over 145 beekeepers, highlighting the strong interest across the industry.

Josh will be visiting Warooka on the Yorke Peninsula on Friday 5th June for the AGRI breakfast. Please register via the Eventbrite below if you would like to attend.

Yorke Peninsula AGRI. Breakfast and Beekeeper Meet-Up Tickets, Friday, June 5 • 8 AM - 9:30 AM | Eventbrite

If you're seeking general information, want to refresh your knowledge or are looking for more technical detail on a subject, please visit www.varroa.org.au

Upcoming events:



How to report suspected varroa mites

If you detect or suspect varroa mite in your hives:

Email: PIRSA.beebiosecurity@sa.gov.au

Or call the **Exotic Plant Pest Hotline 1800 084 881**

FaB Mentors

The Family and Business (FaB) Mentors provide free independent, and confidential support to primary producers, including beekeepers, across South Australia. FaB Mentors offer a listening ear and can connect you with a range of assistance options, such as financial counselling, emotional wellbeing services and government support services. Whether you are facing industry challenges, adverse weather conditions or market fluctuations, FaB Mentors can help you navigate available resources.

The FaB team has a diverse variety of business and agricultural backgrounds. Contact any of the mentors and they will link you to the most appropriate assistance.

See here for further information and contact details.

Missed a Biosecurity Notice?

If you have missed a biosecurity notice, all past and current notices are available to view on the PIRSA Varroa webpage, under the *Response in South Australia*

section, in the *Industry Updates and Information* drop down box.

Do you know someone who keeps bees and may need a reminder to register?

By law, all beekeepers must be registered to keep bees and maintain hives.

Any person keeping honey bees, whether it's a single backyard hive or a commercial operation, must register annually.

Registration enables PIRSA to contact you with urgent biosecurity alerts (e.g. varroa mite), supports industry protection by tracking pests and diseases and provides access to VDO supports, educational materials and workshops.

Encourage them to register if they have not already by signing up through our website today.

Are your details up to date?

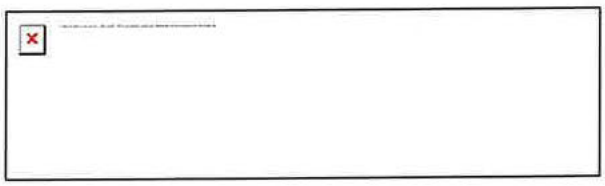
As a registered beekeeper, you receive the latest information on training events and opportunities including any biosecurity concerns for the apiary industry.

If you have changed your address or any other contact details, you need to notify PIRSA by completing the change of ownership or address form and emailing it to PIRSA.picregistrations@sa.gov.au

More information

- PIRSA
- National Varroa mite Management Program
- Australian Honey Bee Industry Council (AHBIC)
- Australian Government

Do you know a beekeeper who doesn't receive these updates? Encourage them to register if they have not already, and sign up through our website.





This email was sent to joanna.wright@sa.gov.au

Why did I get this? · Unsubscribe from this list · Update subscription preferences · Share the newsletter
Primary Industries and Regions SA · 11 Waymouth Street · Adelaide, SA 5000 · Australia

Security Classification: 01 Public



From: Duong Nguyen
To: Stedman, Michael (PIRSA)
Subject: Re: Varroa samples to NSW DPIRD from SA - acaracide resistance testing
Date: Friday, 22 May 2026 4:27:43 PM
Attachments: Outlook-Illustrati.png
Outlook-LinkedIn i.png
Outlook-Instagram .png
Outlook-Facebook i.png
Outlook-wwkwvqcu.png
Outlook-hscjoeok.png
Outlook-tc3c5jrd.png
Outlook-qxqg31qy.png
Outlook-nv0zm4ky.png
Outlook-lofwus0f.png
Report 22.05.2026 by DN_SA Varroa destructor resistance testing.docx

---

Hi Michael,

The attached file contains the resistance testing results for your samples. I noted in the report that some samples had only a few mites, so the data may not accurately represent the true frequency of resistance in the tested populations.

Please let me know if you have any questions.

Best regards,
Duong

Dr Duong Nguyen
Research Scientist | Leader - Insecticide Resistance and Genomics
Plant Biosecurity Research & Diagnostics | Agriculture and Biosecurity
Department of Primary Industries
and Regional Development

T 02 4640 6389 **M** Clause 6(1) **E** duong.nguyen@dpird.nsw.gov.au
Google Scholar ORCID

nsw.gov.au/dpird

Elizabeth Macarthur Agricultural Institute
Woodbridge Road, Menangle NSW 2568

Department of Primary Industries and Regional Development

We stand on Country that always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

From: Stedman, Michael (PIRSA) <Michael.Stedman@sa.gov.au>
Sent: Monday, May 11, 2026 2:38 PM
To: Duong Nguyen <duong.nguyen@dpird.nsw.gov.au>
Subject: Varroa samples to NSW DPIRD from SA - acaracide resistance testing - to DN 1

OFFICIAL

Hi Dr Nguyen, please find attached documentation for varroa samples from SA sent for acaracide resistance testing (both combined synthetic pyrethroid and amitraz resistance profiles).

We also have several queries for testing from individual beekeepers in SA. Can you advise:

- Cost per sample,
- Turn around time,
- Whether you are accepting samples from individuals, and whether you have a form for them, and require payment up front

Regards,

Michael Stedman | Program Co-ordinator, Apiaries
Department of Primary Industries and Regions
Government of South Australia | 33 Flemington Street, GLENSIDE SA 5065
P: +61 8 8429 0872 | **M:** Clause 6(1) | **E:** michael.stedman@sa.gov.au
pir.sa.gov.au

Service I Professionalism I Trust I Respect I Collaboration & Engagement I Honesty & Integrity I Courage & Tenacity I Sustainability

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Department of Primary Industries
and Regional Development

22/05/2026

<u>Diagnostic report:</u> Suspect resistance of Varroa mites collected from SA apiaries to synthetic miticides

Samples submitted by:

Michael Stedman,
South Australia Dept. of Primary Industries,
33 Flemington St, Glenside, SA, 5065.
Michael.Stedman@sa.gov.au
Clause 6(1)

ENTO code: ENTO-Varr 96

Menangle Specimen number: Pending

<u>Background:</u>

- Pyrethroid resistance (VGSC target site):

Primarily associated with mutations at position 925 (L925V, L925I, L925M).

  - L925V: common in Europe
  - L925I/M: predominant in North America; also detected with L925V in Türkiye and Greece
  - M918 mutation: less common, also linked to resistance

- Amitraz resistance (Octβ2R target site):

Associated with mutations in the octopamine receptor (Octβ2R), including:

  - Y215H (North America)
  - N87S (France)
  - F290L (Spain)

These mutations likely evolved independently under selection pressure.

<u>Methods:</u>

Genomic DNA was extracted from individual Varroa mites. Detection of resistance-associated mutations was performed using TaqMan SNP genotyping assays. Pyrethroid resistance (e.g. *L925I/M* mutations in the voltage-gated sodium channel) was assessed using allele-specific SNP assays (Affinity Plus format), while amitraz resistance markers were detected using TaqMan assays with MGB-NFQ probes.

All assays were validated using synthetic gene fragments (gBlocks) and reference samples previously confirmed by Sanger sequencing. Positive and negative controls were included in each run to ensure assay performance and result reliability.

Pyrethroid resistance testing was incomplete. The first assay was used to screen Varroa samples as susceptible or resistant-associated. Mutation typing (I vs M) is ongoing.

Results:

See Table 1.

It's important to note that some samples contained very few mites. As a result, the findings may not accurately represent the true resistance frequency of the population. Therefore, the data from these samples should be viewed as indicative or reference only, rather than definitive. Ongoing monitoring is essential to make informed treatment decisions.

Table 1. Pyrethroid (L925I/M) and Amitraz (Y215H) resistance profiles in investigated *Varroa destructor* populations

Samples	ENTO lot#	Menangle Specimen number	Pyrethroid resistance			Amitraz resistance			
			Total successfully genotyped	Susceptible (%)	Resistant carriers (%)	Susceptible (%)	Heterozygous (%)	Homozygous (%)	Resistant carriers (%)
Vial 1 - Clause 6(1)	ENTO - Varr 96		3	0%	100%	0%	0%	100%	100%
Vial 2 -	ENTO - Varr 96		3	0%	100%	0%	0%	100%	100%
Vial 3 -	ENTO - Varr 96		1	0%	100%	0%	0%	100%	100%
Vial 4 -	ENTO - Varr 96		4	0%	100%	0%	0%	100%	100%
Vial 5 -	ENTO - Varr 96		2	0%	100%	0%	0%	100%	100%
Vial 6 -	ENTO - Varr 96		2	0%	100%	0%	0%	100%	100%
Vial 7 -	ENTO - Varr 96		3	100%	0%	100%	0%	0%	0%
Vial 8 -	ENTO - Varr 96		10	100%	0%	100%	0%	0%	0%
Vial 9 -	ENTO - Varr 96		9	100%	0%	100%	0%	0%	0%
Vial 10	ENTO - Varr 96		2	100%	0%	100%	0%	0%	0%
Vial 11	ENTO - Varr 96		10	100%	0%	90%	10%	0%	10%
Total			**49**						

Notes:

Susceptible % = % of tested mites that do not carry the resistance mutation and are expected to be controlled effectively by the chemical

Resistant carriers % = % of tested mites that carry at least one copy of the resistance mutation. This includes both heterozygous (one copy) and homozygous (two copies) individuals. This figure indicates the prevalence of resistance in the population.

Heterozygous % = % of tested mites that carry one resistant allele + one susceptible allele

Homozygous % = % of tested mites that carry two copies of the resistance mutation

Acknowledgements

Clause 6(1) **&** Clause 6(1) are thanked for their technical support.



Dr Duong Nguyen

Leader Entomology Insecticide Resistance & Genomics
Plant Biosecurity Research & Diagnostics | Agriculture and Biosecurity
T 02 4640 6389 M Clause 6(1) E duong.nguyen@dpi.nsw.gov.au

References

1. Bahreini, R, González-Cabrera, J, Hernández-Rodríguez, CS, et al. 2025 Arising amitraz and pyrethroids resistance mutations in the ectoparasitic *Varroa destructor* mite in Canada. *Scientific Reports* **15**, 1587.
2. Erdem, E, Koç-İnak, N, Rüstemoğlu, M & İnak, E. 2024 Geographical distribution of pyrethroid resistance mutations in *Varroa destructor* across Türkiye and a European overview. *Exp Appl Acarol* **92**, 309-321.
3. Gonzalez-Cabrera, J., Davies, T.E., Field, L.M., Kennedy, P.J. and Williamson, M.S., 2013. An amino acid substitution (L925V) associated with resistance to pyrethroids in Varroa destructor. PloS one, 8(12), p.e82941.
4. Hubert, J., Nesvorna, M., Kamler, M., Kopecky, J., Tyl, J., Titera, D. and Stara, J., 2014. Point mutations in the sodium channel gene conferring tau-fluvalinate resistance in Varroa destructor. Pest management science, 70(6), pp.889-894.
5. González-Cabrera, J., Rodríguez-Vargas, S., Davies, T.E., Field, L.M., Schmehl, D., Ellis, J.D., Krieger, K. and Williamson, M.S., 2016. Novel mutations in the voltage-gated sodium channel of pyrethroid-resistant Varroa destructor populations from the Southeastern USA. PloS one, 11(5), p.e0155332.

6. Millán-Leiva, A., Marín, Ó., De la Rúa, P., Muñoz, I., Tsagkarakou, A., Eversol, H., Christmon, K., VanEngelsdorp, D. and González-Cabrera, J., 2021. Mutations associated with pyrethroid resistance in the honey bee parasite Varroa destructor evolved as a series of parallel and sequential events. Journal of Pest Science, 94(4), pp.1505-1517.
7. Millán-Leiva, A., Marín, Ó., Christmon, K., Vanengelsdorp, D. and González-Cabrera, J., 2021. Mutations associated with pyrethroid resistance in Varroa mite, a parasite of honey bees, are widespread across the United States. Pest management science, 77(7), pp.3241-3249.
8. Rinkevich, FD, Moreno-Martí, S, Hernández-Rodríguez, CS & González-Cabrera, J. 2023 Confirmation of the Y215H mutation in the β2-octopamine receptor in Varroa destructor is associated with contemporary cases of amitraz resistance in the United States. *Pest Management Science* **79**, 2840-2845.
9. Hernández-Rodríguez, CS, Moreno-Martí, S, Emilova-Kirilova, K & González-Cabrera, J. 2025 A new mutation in the octopamine receptor associated with amitraz resistance in Varroa destructor. *Pest Manag Sci* **81**, 308-315.
10. Mavridis, K, Tsakireli, D, Vlogiannitis, S, et al. 2025 Identification and functional characterization of CYP3002B2, a cytochrome P450 associated with amitraz and flumethrin resistance in the major bee parasite *Varroa destructor*. *Pesticide Biochemistry and Physiology* **210**, 106364.
11. Bertola, M & Mutinelli, F. 2025 Sensitivity and Resistance of Parasitic Mites (*Varroa destructor*, *Tropilaelaps* spp. and *Acarapis woodi)* Against Amitraz and Amitraz-Based Product Treatment: A Systematic Review. *Insects* **16**, 234.

Doc 17

Confirmed by SARDI	185	
Suspect/ Awaiting confirmation	30	
Beekeepers Involved	111	
# Hives (Approx)	19619	
LGA's	31	

Brand	NAME / Load ID	Current Hive Location	GPS	Hive #'s	Status	Confirmation	Surveillance Map (entered)	LGA
				Place only a number in this column Other detail into notes please				
Clause 6(1)	Clause 6(1)	Clause 6(1)	Clause 6(1)	32	+ve	20/11 Confirmed +ve SARDI Morph 27/11 Confirmed V destructor SARDI DNA	y	Clause 6(1)
				31	+ve	25/11 Confirmed +ve SARDI	y	
				1	-ve	27/11 Sticky mat - ve		
				1	-ve	27/11 Sticky mat - ve		
				2	-ve	27/11 Sticky mat - ve		
			Clause 6(1)	10	+ve	25/11 Confirmed +ve SARDI	y	Clause 6(1)
				13	+ve	27/11 Sticky mat +ve Clause 6(1)	y	
				5	+ve	27/11 Sticky mat +ve	y	
				18	+ve	27/11 Sticky mat +ve	y	
				1	-ve	27/11 Sticky mat - ve		
				1	-ve	27/11 Sticky mat - ve		
				1	-ve	27/11 Sticky mat - ve		
				1	+ve	27/11 Sticky mat +ve Clause 6(1)	y	
				1	-ve	27/11 Sticky mat - ve		
				6	+ve	26/11 Sticky mat +ve Clause 6(1)	y	
				1	-ve	28/11 Sticky mat - ve		
				1	-ve	28/11 Sticky mat - ve		
				1	-ve	28/11 Sticky mat - ve		
				1	-ve	28/11 Sticky mat - ve		
				1	-ve	28/11 Sticky mat - ve Clause 6(1) - 1 hive		
				8	-ve	28/11 Sticky mat - ve		
				1	-ve	28/11 Sticky mat - ve		
			Clause 6(1)	6	+ve	27/11 SARDI Confirmed +ve SARDI, 04/05/26 - SARDI Confirmed, 398 mites / 300 bees	Yes, Clause 6(1)	Clause 6(1)
				9				
				2				
				1				
				1				
				1				
			Clause 6(1)	158	+ve	28/11 Confirmed SARDI	y	Clause 6(1)
					-ve	4-6/12 Initial surveillance - Sticky mats		
					+ve	AREA OF INTEREST - trace back	y	
					+ve	09/12/2025 SARDI confirmed	y	
				20	+ve	12/12/2025 SARDI confirmed ref. email from Clause 6(1)	y	
				24	+ve	29/01/26, SARDI confirmed ref. email from Clause 6(1)	Yes, 30/01/26	
				4	+ve	12/12/2025 SARDI confirmed ref. email from Clause 6(1)	Y	
				3	+ve	12/12/25, +ve (x1) detected during brood uncapping, sample submitted, 14/12/25 Confirmed +ve SARDI	y	

Clause 6(1) Clause 6(1)	Clause 6(1)	Clause 6(1)	1	+ve	22/12/2025 SARDI confirmed ref. email from Clause 6(1)	y	Clause 6(1)
			120	+ve	05/01/2026 SARDI Confirmed	y	
			88	+ve	05/01/2026 SARDI Confirmed	y	
			100	+ve	02/07/26 SARDI confirmed Clause 6(1)	Yes Clause 6(1)	
			100	+ve	02/07/26 SARDI confirmed Clause 6(1)	Yes, Clause 6(1)	
			200				
			200				
			200				
			70	+ve	16/07/26 - SARDI Confirmed ref. # Clause 6(1)	Yes, Clause 6(1)	
			70	+ve	16/07/26 - SARDI Confirmed ref. # Clause 6(1)	Yes, Clause 6(1)	
Clause 6(1)			33	+ve	15/01/2026 SARDI Confirmed	y	
			10	+ve	5/3/2026 - Clause 6(1)	Yes, Clause 6(1)	
			112	+ve	15/01/2026 SARDI Confirmed - Clause 6(1)	y	
			112	+ve	15/01/2026 SARDI Confirmed - Clause 6(1)	y	
			112	+ve	Clause 6(1)	y	
			135		Clause 6(1) 18/01/26, image sent, appears ve+, awaiting sample		
			22		Clause 6(1) called , suspect vm but lost it, but has retained bee sample, rewashed 22/01 (ve-) - 6(followed up 09/02/2026 Clause 6(1) will advise on results.		
			26	+ve	Confirmed - Clause 6(1)	Yes: Submitted by beekeeper	Clause 6(1)
			120	+ve	02/02/26, SARDI Confirmed, Clause 6(1)	Yes, 02/02/26 Clause 6(1)	
				+ve	02/02/26, SARDI Confirmed, Clause 6(1)	Yes, 03/02/26 Clause 6(1)	
				+ve	linked above	Yes, 03/02/26 Clause 6(1)	
				+ve	linked above		
				+ve	02/02/26, SARDI Confirmed, Clause 6(1)	Yes, 03/02/26 Clause 6(1)	

Clause 6(1)	Clause 6(1)	Clause 6(1)	Clause 6(1)		Clause 6(1)
			80	+ve	11/2 Clause 6(1) 17/2 SARDI Confirmed Clause 6(1)
			480	+ve	13/2 Clause 6(1) 17/2 SARDI Confirmed Clause 6(1)
			144	+ve	13/2 Clause 6(1) . 17/2 SARDI Confirmed Clause 6(1)
				Suspect	Confirmed Clause 6(1)
			4	+ve	02/03/26 SARDI confirmed, Clause 6(1)
			320	Suspect	17/0 Clause 6(1)
			3	+ve	13/2 Clause 6(1) . 17/2 SARDI Confirmed Clause 6(1)
			1	+ve	13/2 Clause 6(1) . 17/2 SARDI Confirmed Clause 6(1)
			500	+ve	17/02 Clause 6(1)
			3	+ve	19/02/26 SARDI confirmed, Clause 6(1)
			100	+ve	02/03/26 SARDI confirmed, Clause 6(1)
			100	+ve	8/5/26, SARDI confirmed, Clause 6(1)
			54	+ve	8/5/26, SARDI confirmed, Clause 6(1)
			80	Suspect	18/08/26 - samples being arranged
			35	+ve	23/02/2026 Clause 6(1)
			4	+ve	Clause 6(1)
			2	+ve	Clause 6(1)
			1000	+ve	Confirmed - Clause 6(1)
				+ve	Clause 6(1) - No sample provided
				+ve	Clause 6(1) - No sample provided
				+ve	Clause 6(1) No sample provided
				+ve	No sample provided
				+ve	
				+ve	
				+ve	

yes		
Yes		
Yes		
Yes, Clause 6(1)		
yes		
yes		
yes		
Yes		
no Clause 6(1)		
Yes, Clause 6(1)		
Yes, Clause 6(1)		
Yes, Clause 6(1)		
Yes, Clause 6(1)		
coming soon		
Yes, Clause 6(1)		
Yes Clause 6(1)		
Yes Clause 6(1)		
Yes, Clause 6(1)		
Yes, Clause 6(1)		
Yes, Clause 6(1)		
Yes,	Clause 6(1)	
Yes		
Yes		
Yes		
Yes		

[redacted]	[redacted]	[redacted]	[redacted]		+ve	[redacted]		Yes,	[redacted]
					+ve			Yes,	
					+ve			Yes,	
					Suspect	samples arranged		Yes,	
					Suspect	samples arranged		Yes,	
					Suspect	samples arranged		Yes,	
					Suspect	samples arranged		Yes,	
					Suspect	samples arranged		Yes,	
				60	+ve	24/03/2026 SARDI Confirmed, [redacted]		Yes [redacted]	
				80	+ve	16/3/26 SARDI confirmed - [redacted]		Yes,	
				120	+ve	[redacted]		Yes,	
				100	+ve	16/03/26 SARDI confirmed - [redacted]		Yes,	
				50	+ve	19/03/26 SARDI confirmed - [redacted]		Yes, [redacted]	
				700	+ve	[redacted]		no	
				600	+ve			no	
				300	+ve	26/03/26 SARDI Confirmed [redacted] - combined sample		Yes,	
				1700	+ve	26/03/26 SARDI Confirmed [redacted] - combined sample		Yes,	
					+ve	26/03/26 SARDI Confirmed [redacted] - combined sample		Yes,	
					+ve	Beekeeper confirmed			
[redacted]	[redacted]		[redacted]	120	+ve	27/03/26 SARDI Confirmed [redacted]		Yes, [redacted]	
				120	+ve	02/06/2026, [redacted]		coming soon	
				168	+ve	29/05/26, washing in-progress, results tba			
					+ve	29/05/26, washing in-progress, results tba			
[redacted]	[redacted]		[redacted]	100	+ve	09/04/26 SARDI Confirmed [redacted]		Yes, [redacted]	
				72	+ve	23/0626, awaiting SARDI confirmation [redacted]			
				72		22/06/26, samples being arranged			
				72		22/06/26, samples being arranged			
				72	+ve	23/0626, awaiting SARDI confirmation [redacted]			
[redacted]	[redacted]			8	+ve	09/04/26 SARDI Confirmed [redacted]		Yes [redacted]	

Clause 6(1)	Clause 6(1)	Load 1 -	Clause 6(1)	720	+ve	13/04/26 SARDI Confirmed, Clause 6(1)	Yes, Clause 6(1)	Clause 6(1)
		Load 2 -			+ve	13/04/26 SARDI Confirmed, Clause 6(1)	Yes,	
		Load 3 -		160	+ve	beekeeper notification on further monitoring, treatment installed		
		Load 4 -	tba	160	+ve	beekeeper notification on further monitoring, treatment installed		
		Load 5 -	tba	160	+ve	beekeeper notification on further monitoring, treatment installed		
		Load 6 -	tba	160				
Clause 6(1)	Clause 6(1)	Clause 6(1)	Clause 6(1)	200	+ve	14/04/26 SARDI Confirmed, Clause 6(1)	Yes Clause 6(1)	Clause 6(1)
					+ve	together with above	together with above	
				600	+ve	together with above	together with above	
				104	+ve	27/07/26 - SARDI confirmed Clause 6(1)	Yes Clause 6(1)	
				104	+ve	27/07/26 - SARDI confirmed Clause 6(1)	Yes	
Clause 6(1)	Clause 6(1)	Clause 6(1)	Clause 6(1)	600	+ve	27/04/26, samples collected, awaiting SARDI lab analysis Clause 6(1) confirmed 9 mites	Yes, Clause 6(1)	Clause 6(1)
				14	+ve	27/04/26, samples collected, awaiting SARDI lab analysis Clause 6(1) confirmed 1 mite. 02/07/26, Clause 6(1)	Yes,	
			tba	266	+ve	18/05/26, samples being collected per additional apiary site. 02/07/26, Clause 6(1)		
			tba	96	+ve	02/07/26, SARDI confirmed Clause 6(1)		
			Clause 6(1)	96	+ve	02/07/26, SARDI confirmed Clause 6(1)		
				96	+ve	02/07/26, SARDI confirmed Clause 6(1)		
Clause 6(1)	Clause 6(1)	Clause 6(1)		120	+ve	Clause 6(1)	Yes Clause 6(1)	
				120	+ve		Yes	
				130	+ve		Yes	
					+ve			
					+ve			
	Clause 6(1)	Clause 6(1)		20	+ve	24/04/26 SARDI Confirmed, Clause 6(1)	Yes, Clause 6(1)	
				9	+ve	24/04/26 SARDI Confirmed, Clause 6(1)	Yes, Clause 6(1)	
				4	+ve	24/04/26 SARDI Confirmed, Clause 6(1) 27/06/2(Clause 6(1) 7	Yes,	
				3	+ve	27/06/26 Clause 6(1)		
				2	+ve	27/06/26 Clause 6(1)		
				9	+ve	29/05/26 SARDI Confirmed, Clause 6(1)		

		[redacted]	[redacted]	2	+ve	27/06/26[redacted]		[redacted]
			coming soon					
			coming soon					
			coming soon					
[redacted]	[redacted]	[redacted]	[redacted]	11	+ve	27/04/26, samples collected, awaiting SARDI lab analysis[redacted] confirmed 11 mites	Yes, [redacted]	
				19	+ve	27/04/26, samples collected, SARDI lab -[redacted]	Yes,	
				2	+ve	27/04/26, samples collected, awaiting SARDI lab analysis[redacted] confirmed 11 mites	Yes,	
				1	+ve	27/04/26, samples collected, awaiting SARDI lab analysis[redacted] confirmed 59 mites	Yes,	
				4	+ve	27/04/26, samples collected, awaiting SARDI lab analysi[redacted] confirmed 27 mites	Yes,	
				1	+ve	27/04/26, samples collected, awaiting SARDI lab analysis[redacted] confirmed 3 mites	Yes,	
				4	+ve	27/04/26, samples collected, awaiting SARDI lab analysi[redacted] confirmed 5 mites	Yes,	
				4	+ve	05/05/26, SARDI confirmed[redacted]	Yes,	
				2				
				1	Suspect	11/09/26 - samples being arranged, images appear ve+		
[redacted]	[redacted]		coming soon	100	+ve	06/05/26, washing in-progress, samples being arranged. Images and video ve+	28/07 - chasing up this week	
			coming soon	600	+ve	06/05/26, washing in-progress, samples being arranged. Images and video ve+	28/07 - chasing up this week	
			coming soon	200	+ve	06/05/26, washing in-progress, samples being arranged. Images and video ve+	28/07 - chasing up this week	
[redacted]	[redacted]		[redacted]	200	Suspect	Arranging samples delivery -Beekeeper forgot to deliver - Confirmed[redacted]	Yes[redacted]	
			tbc		Suspect	Arranging samples delivery		
[redacted]	[redacted]	[redacted]	[redacted]	1	+ve	14/05/26, SARDI confirmed[redacted]	Yes [redacted]	
				96	+ve	15/07/26 - SARDI confirmed,[redacted]	Yes	
				96	+ve	15/07/26 - SARDI confirmed[redacted]	Yes	
				144	+ve	15/07/26 - SARDI confirmed[redacted]	Yes	
				144	+ve	15/07/26 - SARDI confirmed, [redacted]	Yes	
				144	+ve	15/07/26 - SARDI confirmed, as above (together with)	Yes	
				144	+ve	15/07/26 - SARDI confirmed, as above (together with)	Yes	

Clause 6(1)	Clause 6(1)	Clause 6(1)	Clause 6(1)	740	+ve	Confirmed - Clause 6(1)	Yes,	Clause 6(1)	Clause 6(1)
				140	+ve	Confirmed - Clause 6(1)	Yes,		
				10	+ve	22/05/26, SARDI confirmed Clause 6(1)	Yes,		
				900	Suspect	Awaiting for sample	Yes,		
				10	+ve	08/06/26, Clause 6(1)	Yes,		
				950	+ve	02/07/26, SARDI confirmed Clause 6(1)	Yes,		
				104	+ve	02/07/26, SARDI confirmed Clause 6(1)	Yes,		
				1170		01/06, Clause 6(1) images appear ve+, samples being arranged			
	1 x load	Clause 6(1)							
	2 x loads				+ve	04/06/26, SARDI Confirmed Clause 6(1)	Yes Clause 6(1)		
	1 x load				+ve	04/06/26, SARDI Confirmed Clause 6(1)	as above, within 2-5 km		
	1 x load				+ve	04/06/26, SARDI Confirmed Clause 6(1)	as above, within 2-5 km		
	1 x load								
	1 x load				+ve	04/06/26, SARDI Confirmed Clause 6(1)	Yes, Clause 6(1)		
	1 x load				+ve	04/06/26, SARDI Confirmed Clause 6(1)	as above, within 2-5 km		
	1 x load				+ve	04/06/26, SARDI Confirmed Clause 6(1)	as above, within 2-5 km		
	1 x load								
Clause 6(1)	Clause 6(1)	Clause 6(1)		4	+ve	12/06/26 - SARDI confirmed, Clause 6(1)	Yes Clause 6(1)		
				5	+ve	12/06/26 - SARDI confirmed, Clause 6(1)	Yes Clause 6(1)		
				1					
				5	+ve	12/06/26 - SARDI confirmed Clause 6(1)	Yes, Clause 6(1)		
				13					
				1	+ve	17/06/26 - SARDI Confirmed Clause 6(1)	Yes	Clause 6(1)	
				2	+ve	19/06/26 - SARDI confirmed ref. MS. 03/07/26, SARDI confirmed Clause 6(1) 27/07/26 - SARDI confirmed Clause 6(1)	Yes		
				3					

		Clause 6(1)	Clause 6(1)	60	+ve	27/07/26 - SARDI confirmed Clause 6(1)	Yes,	Clause 6(1)	Clause 6(1)
				60	+ve	together with above	Yes,		
				60					
				60					
				60					
			:ba, close to above	60					
			:ba, close to above	60					
Clause 6(1)	Clause 6(1)	Clause 6(1)	Clause 6(1)	100	+ve	02/07/26, SARDI confirmed Clause 6(1)	Yes,	Clause 6(1)	Clause 6(1)
				92	+ve	02/07/26, SARDI confirmed Clause 6(1)	Yes,		
	Clause 6(1)		:ba, hives recently moved to new site	3	+ve	16/07/26 - SARDI confirmed Clause 6(1)	Yes,		
			Clause 6(1)	26					
				4	Suspect	06/07/26 - followed up, samples being arranged	Yes,	Clause 6(1)	
	Clause 6(1)			96	+ve	15/07/26 - SARDI confirmed, Clause 6(1)	Yes,		
				96	+ve	15/07/26 - SARDI confirmed, Clause 6(1)	Yes,		
			:s above	96	+ve	15/07/26 - SARDI confirmed, as above (together with)	Yes,		
			:oming soon	96					
			:oming soon	96					
			:oming soon	96					
Clause 6(1)	Clause 6(1)		Clause 6(1)	96	+ve	15/07/26 - SARDI confirmed, Clause 6(1)	Yes,	Clause 6(1)	
			:s above	96	+ve	15/07/26 - SARDI confirmed, as above (together with)	Yes,		
			:s above	96	+ve	15/07/26 - SARDI confirmed, as above (together with)	Yes,		
			:oming soon	96					
Clause 6(1)	Clause 6(1)		Clause 6(1)	80	+ve	15/07/26 - SARDI confirmed, Clause 6(1) - 6/8/26 - Resistance samples Clause 6(1)	Yes, Clause 6(1)		
				2	+ve	15/07/26 - SARDI confirmed, Clause 6(1)	Yes, Clause 6(1)		
				2					
	Clause 6(1)			108	+ve	16/07/26 - SARDI confirmed Clause 6(1)	Yes, Clause 6(1)		
				96	+ve	16/07/26 - SARDI confirmed Clause 6(1)	as above, together with		
				96	+ve	16/07/26 - SARDI confirmed Clause 6(1)	as above, together with		
				96	+ve	together with above			
Clause 6(1)	Clause 6(1)			2					
				2	+ve	27/07/26 - SARDI confirmed Clause 6(1)	Yes,	Clause 6(1)	
	Clause 6(1)			1	+ve	27/07/26 - SARDI confirmed Clause 6(1)	Yes,		
				3	+ve	27/07/26 - SARDI confirmed Clause 6(1)	Yes,		

Clause 6(1)	Clause 6(1)	Clause 6(1)	tba	tba	+ve	27/07/26 - SARDI confirmed Clause 6(1)	tba		
			Clause 6(1)	100	+ve	Confirmed Clause	Yes,	Clause 6(1)	
	Load 2			100	+ve	Confirmed Clause	Yes,		
	Load 3			100	+ve	Confirmed SARDI - Clause 6(1)	Yes,		
Clause 6(1)	Clause 6(1)			10	+ve	17/08/26 - SARDI confirmed Clause 6(1)	Yes,		Clause 6(1)
				30					
Clause 6(1)	Clause 6(1)			2	+ve	17/08/26 - SARDI confirmed, Clause 6(1)	Yes,		
				3	+ve	17/08/26 - SARDI confirmed Clause 6(1)	Yes,		
				2	+ve	12/08/26 - SARDI confirmed Clause 6(1)	Yes,		
				2	Suspect	16/08/26 - Samples being arranged	Yes,		
				305	Suspect	18/08/27 - samples being arranged	Yes,		
					+ve	26/08/26 - reference below	Yes,		
				18	+ve	03/09/26 - SARDI confirmed, sample Clause 6(1)	Yes,		
				86					
Clause 6(1)	Clause 6(1)			14	+ve	04/08/26 - SARDI confirmed, sample Clause 6(1)	Yes,	Clause 6(1)	
				82	+ve	03/09/26 - SARDI confirmed, sample Clause 6(1)	Yes,		
			coming soon	600	Suspect	01/09/26 - samples being arranged	coming soon		
			coming soon	100	Suspect	01/09/26 - samples being arranged	coming soon		
Clause 6(1)	Clause 6(1)		coming soon	505	Suspect	22/08/26 - samples being arranged	coming soon		
			Clause 6(1)	1100	+ve	03/09/26 - SARDI confirmed, sample Clause 6(1)	Yes	Clause 6(1)	
				350					
Clause 6(1)	Clause 6(1)			5	+ve	03/09/26 - SARDI confirmed, sample Clause 6(1)	Yes, Clause 6(1)		
				1	+ve	03/09/26 - SARDI confirmed, sample Clause 6(1)	coming soon		
				2	+ve	03/09/26 - SARDI confirmed, sample Clause 6(1)	Yes Clause 6(1)		
				1	+ve	10/09/26 - SARDI confirmed, sample Clause 6(1)	coming soon		
				3	+ve	10/09/26 - SARDI confirmed, sample Clause 6(1)	coming soon		
				1	+ve	10/09/26 - SARDI confirmed, sample Clause 6(1)	Yes,	Clause 6(1)	
Clause 6(1)	Clause 6(1)			3	+ve	04/09/26 - SARDI confirmed, sample Clause 6(1)	Yes,		
				2	Suspect	31/08/26 - samples being arranged, Clause 6(1) (02/09)	Yes,		
			coming soon	5	Suspect	04/09/26 - samples being arranged	coming soon		

		Clause 6(1)	Clause 6(1)	2	Suspect	04/09/26 - samples being arranged	Yes Clause 6(1)	Clause 6(1)
			coming soon	2	Suspect	04/09/26 - samples being arranged	coming soon	
			coming soon	3	Suspect	04/09/26 - samples being arranged	coming soon	
Clause 6(1)	tause 6(1)		Clause 6(1)	6	+ve	04/09/26 - SARDI confirmed, sample Clause 6(1)	Yes, Clause 6(1)	
				3	+ve	04/09/26 - SARDI confirmed, sample Clause 6(1)	Yes,	
				2	Suspect	04/09/26 - samples being arranged	Yes,	
				2	Suspect	07/09/26 - samples being arranged	Yes,	
				42	Suspect	07/09/26 - samples being arranged	Yes,	
				4				
				4	Suspect	07/09/26 - samples being arranged	Yes Clause 6(1)	
				700	+ve	10/09/26 - SARDI confirmed, sample Clause 6(1)	Yes, Clause 6(1)	
				2	+ve	10/09/26 - SARDI confirmed, sample Clause 6(1)	Yes,	
			coming soon	2	Suspect	09/09/26 - samples being arranged, initial mites were thrown away	coming soon	
			Clause 6(1)	2	Suspect	10/09/26 - samples being delivered to Clause 11/09 (Fri)	Yes, Clause 6(1)	
				2	Suspect	11/09/26 - samples being arranged Clause 6(1) 17/09	coming soon	

Notes	Location moved from	Movement Date	Move To	Moved to Date	Wash Date
	Clause 6(1)	7/09/2025	Clause 6(1)		
		7/09/2025			
	Clause 6(1)	24/10/2025			
		24/10/2025			
		24/10/2025			
		24/10/2025			
		24/10/2025			
	Clause 6(1)	24/10/2025			
		24/10/2025			
		24/10/2025			
		24/10/2025			
Clause 6(1)					
		24/10/2025			5/04/2016
Clause 6(1)					
	Clause 6(1)				
		late July to late August	Clause 6(1)	early sept	12/04/2025
		12/08/2025		12/08/2025	12/07/2025
					28/02/2026
		12/08/2025		12/08/2025	12/07/2025
	na, static hive	na		na	12/12/25, 08/06/26

Clause 6(1)	na, static hive	na	Clause 6(1)	na	21/12/25 and 23/12/25, 28/05/26
	Clause 6(1)	since Sept 2025	Clause 6(1)		26/06/26
		since Sept 2025			
		since Sept 2025			
		since Sept 2025			
		since Sept 2025			
Clause 6(1)					
	Clause 6(1)	Apr-26		Apr-26	7/10/2026
	na, static hive	na		na	13/01/2026
	static since Dec 2025				5/03/2026
					15/01/2026
					15/01/2026
					15/01/2026
	Clause 6(1)	Arrived via post, 16/01/2026	Clause 6(1)		18/01/26
	Static				
Clause 6(1)	Clause 6(1)	Arrived in Port Pirie, (1) 22 Oct 2025 (2) 23 Oct 2025	Clause 6(1)	(1) 21 Nov 2025 (2) 24 Nov 2025	31/01/26, 15/05
	Clause 6(1)	2/02/2026	Clause 6(1)	2/02/2026	31/01/26

[redacted]				
[redacted]		[redacted]		
[redacted]	46302	Current		22/7/2026
[redacted]				
[redacted]				23/08/26
				17/02/26
nil, static hives	na	[redacted]	na	18/02/2026, 23/04/2026
[redacted]	26/10/2025	[redacted]	26/10/2025	23/02/2026, 06/05/26
				5/06/2026
				5/06/2026
static (6mths)	na	static (6mths)	na	18/08/26
nil, static hives	na	[redacted]	na	23/02/2026
nil. static hives	na		na	3/10/2026
nil, static hives				23/02/2026
[redacted]	Early October	Current location - See GPS		25-26/02/2026
	Early October	Current location - See GPS		25-26/02/2026
	Early October	Current location - See GPS		25-26/02/2026
	24/02/26	Current location - See GPS		46145
	Early December	Current location - See GPS		46145

Clause 6(1)					
	nil. static hives	na	Clause 6(1)	na	05/03/26 and 09/03/26
	Clause 6(1)	15/09/25 - 17/09/25		11/11/2025 (current location)	3/09/2026
					6/09/2026
					3/12/2026
	nil. static hives				13/03/26
	Clause 6(1)	tba	Clause 6(1)	tba	25/03/26
		tba		tba	25/03/26
		tba		tba	25/03/26
		mid April		mid April	26-Apr
	Clause 6(1)	3/10/2026		3/10/2026	26/3/26
		13/3/2026		13/3/2026	30/05/26
		13/3/2026		13/3/2026	
		13/3/2027		13/3/2027	
	Clause 6(1)	11-Jan			4/02/2026
	static	na	static	na	4/07/2026

Clause 6(1)		Clause 6(1)			Clause 6(1)		4/08/2026
							4/10/2026
							14/4/26
					tba		16/4/26
					tba		16/4/26
Clause 6(1)		Clause 6(1)		tba	Clause 6(1)		13/04/2026
				tba			22/05/2026
				tba			22/05/2026
							17/07/2026
							17/07/2026
Clause 6(1)		Clause 6(1)		1/10/2026	Clause 6(1)	4/07/2026	14/04/26
							28/06/26
		Clause 6(1)			Clause 6(1)	May	28/06/26
						Feb	28/06/26
							28/06/26
							28/06/26
		Clause 6(1)			Current location		16/04/26
					Current location		16/04/26
Clause 6(1)		TBC			Current location		20/04/26
							5/11/2026
							6/11/2026
		tba		Sep-25	Current location	Sep-25	20/04/2026
		tba					20/04/2026
		tba					13/05/26
							29/05/26
							29/05/26

Clause 6(1)					
Clause 6(1)	static	na	static	na	22/04/2026
	static	na	static	na	23/04/2026
	static	na	static	na	23/4/26
	static	na	static	na	24/04/26
	static	na	static	na	24/04/26
	static	na	static	na	30/4/26
	static	na	static	na	26/4/26
	static	na	static	na	5/01/2026
	static	na	static	na	
	Swarm	Sep-26	Clause 6(1)	Sep-26	9/11/2026
	Clause 6(1)	tba		tba	5/01/2026
		tba		tba	5/01/2026
		tba		tba	upcoming
		Early April			5/05/2026
Clause 6(1)					
	static	na	static	na	5/12/2026
	Clause 6(1)	5/10/2026	Clause 6(1)	5/10/2026	5/12/2026
	as above	as above	as above	as above	7/07/2026
	as above	as above	as above	as above	7/07/2026
	as above	as above	as above	as above	7/07/2026
	as above	as above	as above	as above	7/07/2026
	as above	as above	as above	as above	7/07/2026

Clause 6(1)	Clause 6(1)	Late March	Current		19/05/26
	static	na	static	na	20/05/26
	Clause 6(1)	3/12/2026	current		23/05/2026
Clause 6(1)	Static	na	Static	na	23/05/26
	Clause 6(1)	Apr-26	Clause 6(1)	Apr-26	27/05/26
		Apr-26		Apr-26	27/05/26
		early Feb 2026		early March 2026	30/05/26
as above		early Feb 2026		early March 2026	tba
as above		early Feb 2026		early March 2026	30/05/26
as above		early Feb 2026		early March 2026	30/05/26
as above		early Feb 2026		early March 2026	30/05/26
as above		early Feb 2026		early March 2026	tba
as above		early Feb 2026		early March 2026	30/05/26
as above		early Feb 2026		early March 2026	30/05/26
as above		early Feb 2026		early March 2026	30/05/26
as above		early Feb 2026		early March 2026	tba
Clause 6(1)					6/08/2026
					6/08/2026
					6/08/2026
	Clause 6(1)	Dec-25	Clause 6(1)	Dec-25	14/06/26
	static	na	static	na	11/6/2026, 29/06/2026

Clause 6(1)	Clause 6(1)	Mar-26	Clause 6(1)	Mar-26	5/08/2026
		Mar-26		Mar-26	
		Apr-26	Current Location	Apr-26	
		Apr-26	Current Location	Apr-26	
		Mar-26	Current Location	Mar-26	
		Mar-26	Current Location	Mar-26	
		Mar-26	Current Location	Mar-26	
					26/06/26
Clause 6(1)	Clause 6(1)	8/01/2026	Clause 6(1)	na	tba
	static	na	static	na	tba
					7/06/2026
Clause 6(1)					7/06/2026
Clause 6(1)	Clause 6(1)	tba	Clause 6(1)	tba	9/7/2026, 06/08/26,
		Dec-25		Dec-25	7/09/2026
	Static	na	Static	na	
Clause 6(1)	Clause 6(1)				13/07/26
as above					13/07/26
as above					13/07/26
as above					13/07/26
2of (4 total)	Static	na	Static	na	
	Static	na	Static	na	21/07/26
				na	21/07/26
	Static	na	Static	na	21/07/26, 17/08/26

tba	tba	tba	tba	tba	tba
Clause 6(1)	Clause 6(1)	15/05/2026	Clause 6(1)		27/07/2026
		20/05/2026			8/04/2026
		28/06/2026			31/07/2026
	Static	na	Static	na	8/04/2026
	Clause 6(1)	13/08/26	Clause 6(1)	13/08/26	
	Static	na	Static	na	4/8/2026, 26/08/26
	Static	na	Static	na	8/09/2026
	Static	na	Static	na	8/09/2026
	Static	na	Static	na	
	Clause 6(1)	Jul-26	Clause 6(1)	Aug-26	23/08/26
	Static, over 12 months	26-Aug		Aug-26	
	Clause 6(1)	Aug-26		Aug-26	20/08/26, 26/08/26
	Static	na	Static	na	23/08/26
			Clause 6(1)		27/08/26
	Clause 6(1)	1-Sep		1-Sep	9/09/2026
		1-Sep		1-Sep	9/09/2026
		Jul-26		Aug-26	22/08/26
		Jul-26		Aug-26	27/08/26
					28/08/26
					28/08/26
Clause 6(1)					

Clause 6(1)	Static	na	Static	na	31/08/26
	Static	na	Static	na	9/01/2026
	Static	na	Static	na	9/01/2026
	Static	na	Static	na	9/03/2026
	Static	na	Static	na	9/06/2026
	Clause 6(1)	Jul-26	Current location	Sep-26	9/07/2026
	Static	na	Static	na	
	Clause 6(1)	ul-26	Current location	Sep-26	9/07/2026
		ul-26	Current location	Sep-26	9/07/2026
	Static	na	Static	na	9/07/2026
	Static	na	Static	na	9/08/2026
	Static	na	Static	na	9/10/2026
	Static	na	Static	na	9/11/2026

VM count	Threshold	Chems Provided

1 x mite (21/12), 4 x mites (23/12), 100+ mites (28/05)	5 (Autumn)	29/05/26, Bayvarol being arranged C6(1)
10-50 mites / 300 bees	5 (Autumn)	29/06/26, Bayvarol x 200, 100 mats and 100 mesh
3-20 mites / 300 bees	5 (Autumn)	as above
4-14 mites / 300 bees	5 (Autumn)	14/07/26 - Bayvarol x 140 treatment, 20 mats and 20 mesh
Hive 30-2 mites, Hive 15-1 mite, Hive 1-1 mite, Hive 5-3 mites, Hive 4-6 mites		
2 x hives washed x 1 mite each		
see notes		
see notes		
see notes		
2 x mites washed in Clause 6(1)		
see notes		
1 to 3		
1-2 mites / wash, multiple hives suspect, (15/05) 9-14 mites / 300 bees in multiple hives across both Clause 6(1)		15/5, Bayvarol x 94 pks (376 strips)
9-14 mites / 300 bees		as above
9-14 mites / 300 bees		as above
9-14 mites / 300 bees		as above
15/05/26 relocated into the above		as above

4 mites dected via drone uncapping		
	Clause	
40		Bayvarol
28 in alcohol wash performed C6(1)		
20-30 mites / 300 bees	5 (Autumn)	Requested 3 x Bayvarol
1 mite		
19 mites / 300 bees	5 (Autumn)	27/4, Bayvarol x 3 pks (12 strips), plus 6 mats and 6 mesh
6 mites / 300 bees	5 (Autumn)	07/05, Bayvarol x 248 pks (992 strips) + 100 mats and 100 mesh
2 mites / 300 bees	5 (Autumn)	as above
9 mites / 300 bees	5 (Autumn)	as above
tba	5 (Autumn)	
1 x 150+ mites		
1x 30+ mites		
1 to 30 mites		

1-3 mites across multiple hives		
7		
3		Aluen Cap
3		
5 to 20		
5-30 mites / 300 bees, multiple mites in multiple hives across 3 loads so far, further monitoring is underway to	5 (Autumn)	26/3, Bayvarol x 300
5-30 mites / 300 bees, multiple mites in multiple hives across 3 loads so far, further monitoring is underway to	5 (Autumn)	26/3, Bayvarol x 1700
5-30 mites / 300 bees, multiple mites in multiple hives across 3 loads so far, further monitoring is underway to	5 (Autumn)	as above
1-3 mites / 300 bees	5 (Autumn)	as above
1 mite / 300 bees (10 out of 84 hives washed), monitoring continuing, will keep us updated. 02/06, 8 mites / 300 bees	5 (Autumn)	02/06/26, AluenCap, 360 treatments
02/06/26, 3 mites / 300 bees	5 (Autumn)	as above
tba		as above
		as above
1 mite / 300 bees, in multiple hives - 25/05/26, 8 mites / 300 bees	5 (Autumn)	26/05/26, Bayvarol x 72 pkts (288 strips)
4-6 mites / 300 bees within mulitple hives		
28 mites / 300 bees + 21 mites / 300 bees	5 (Autumn)	8/4, Bayvarol x 5

4-36 mites / 300 bees across multiple hives (avg. 15)	5 (Autumn)	13/4, Bayvarol x 600 pks (2400 strips)
4-36 mites / 300 bees across multiple hives (avg. 6-11)	5 (Autumn)	as above
10+	5 (Autumn)	as above
23 mites / 300 bees was highest	5 (Autumn)	as above
10+	5 (Autumn)	as above
4-6 mites / 300 bees within mulitple hives (20/200)	5 (Autumn)	14/4, Bayvarol x 200 pks (800 strips)
4-6 mites / 300 bees within mulitple hives (20/200)	5 (Autumn)	
4-6 mites / 300 bees within mulitple hives (20/200)	5 (Autumn)	
17 mites / 300 bees	5 (Autumn)	27/07/26, Bayvarol x 234 plus 100 mats and 100 mesh
66 mites / 300 bees	5 (Autumn)	as above
2-8 mites / 300 bees	5 (Autumn)	27/4, Bayvarol x 322 pks (1288 strips), plus 20 mats and 20 mesh
2-8 mites / 300 bees	5 (Autumn)	supplied, as above
2-8 mites / 300 bees	5 (Autumn)	27/05/26, Bayvarol x 525 pks, delivery/collection being arranged TBA
2-8 mites / 300 bees	5 (Autumn)	as above
2-8 mites / 300 bees	5 (Autumn)	as above
2-8 mites / 300 bees	5 (Autumn)	as above
11 on alcohol wash	5	Bayvarol
20 on alcohol wash	5	Bayvarol
1 to 5 mites	5	Bayvarol
3 to 5 mites		
3 to 5 mites		
1-4 mites / 300 bees	5 (Autumn)	27/06, Aluen Cap x 80 (360 strips), plus 80 mats and 80 mesh
1-4 mites / 300 bees	5 (Autumn)	as above
1-6 mites / 300 bees	5 (Autumn)	as above
monitoring continues		as above
1-4 mites / 300 bees	5 (Autumn)	as above
1-4 mites / 300 bees	5 (Autumn)	as above

monitoring continues		as above
monitoring continues		as above
monitoring continues		as above
monitoring continues		as above
13 mites / 300 bees, multiple mites across multiple hives	5 (Autumn)	27/4, Bayvarol x 22 pks (88 strips), plus 10 mats and 10 mesh
12 mites / 300 bees	5 (Autumn)	29/4, Bayvarol x 19 pks (76 strips)
23 mites / 300 bees	5 (Autumn)	27/4, Bayvarol x 2 pks (8 strips), plus 2 mats and 2 mesh
70 mites / 300 bees	5 (Autumn)	27/4, Bayvarol x 2 pks (8 strips), plus 3 mats
30 mites / 300 bees	5 (Autumn)	27/4, Bayvarol x 3 pks (12 strips), plus 6 mats and 6 mesh
14 mites / 300 bees	5 (Autumn)	30/4, Bayvarol x 1 pk (4 strips), plus 3 mats and 3 mesh
5 mites / 300 bees	5 (Autumn)	27/4, Bayvarol x 6 pks (24 strips), plus 8 mats and 8 mesh
2-4 mites / 300 bees, 5-6 mites washed 8/5	5 (Autumn)	11/05/26, Bayvarol x 5, plus 20 mats and 20 mesh
30 mites / 300 bees	5 (Autumn)	Requested Api-Bioxal (vaporisation)
4-7 mites / 300 bees	5 (Autumn)	19/05/26, Bayvarol x 1800 packs
4-7 mites / 300 bees	5 (Autumn)	
1-4 mites / 300 bees	5 (Autumn)	
1 - 4 mites in alcohol wash	5	Bayvarol
22 mites / 300 bees	5 (Autumn)	14/05, Bayvarol x 4 strips plus 3 mats and mesh
5 x mite / 300 bees	5 (Autumn)	13/07/26, Aluen Cap x 768 plus 100 mats and 100 mesh
6 x mite / 300 bees	5 (Autumn)	as above
40 x mite / 300 bees	5 (Autumn)	as above
59 x mite / 300 bees	5 (Autumn)	as above
5+ x mite / 300 bees	5 (Autumn)	as above
5+ x mite / 300 bees	5 (Autumn)	as above

2		Bayvarol
1 mite / 300 bees	5 (Autumn)	
1		
Alcohol, 9 mites / 300 bees	5 (Autumn)	08/06/26, AluenCap x 8
Alcohol, 3 mites / 300 bees	5 (Autumn)	29/05, Requested AluenCap [redacted] pending samples [1]
Alcohol, 3 mites / 300 bees	5 (Autumn)	29/05, Requested AluenCap, [redacted] pending samples [1]
Alcohol, 7 mites / 300 bees	5 (Autumn)	02/06, Bayvarol 1160 pkts (4640 strips) plus 100 mats and mesh
		as above
Alcohol, 6 mites / 300 bees	5 (Autumn)	as above
Alcohol, 8-11 mites / 300 bees	5 (Autumn)	as above
Alcohol, 5 mites / 300 bees	5 (Autumn)	as above
		as above
Alcohol, 5 mites / 300 bees	5 (Autumn)	as above
Alcohol, 2 mites / 300 bees	5 (Autumn)	as above
Alcohol, 1-3 mites / 300 bees	5 (Autumn)	as above
		as above
Alcohol, 8-20 mites / 300 bees	5 (Autumn)	11/06/26, Bayvarol x 3
Alcohol, 51 mites / 300 bees	5 (Autumn)	11/06/26, Bayvarol x 5
Alcohol, 6 mites / 300 bees	5 (Autumn)	11/06/26, Bayvarol x 5
Alcohol, 13 mites / 300 bees	5 (Autumn)	15/06/26, Bayvarol x1pk (4 strips) , 3 mats and mesh
11/06/26, 3-6 mites / 300 bees, 29/06/26, 26 mites / 300 bees. 22/07/26	5 (Autumn)	03/07/26, Bayvarol x 2 plus 6 mats and mesh

12 mites / 300 bees (soapy)	5 (Autumn)	
	5 (Autumn)	
8 mites / 300 bees	5 (Autumn)	29/06/26 - Bayvarol x 192 plus 100 mats and 100 mesh
		as above
458 mites / 300 bees	5 (Autumn)	14/07/26 - 3 x Bayvarol (12 strips)
washing in-progress	5 (Autumn)	
1 mite / 300 bees	5 (Autumn)	
1 mite / 300 bees	5 (Autumn)	
	5 (Autumn)	
2 mites / 300 bees	5 (Autumn)	
2 mites / 300 bees	5 (Autumn)	
2 mites / 300 bees	5 (Autumn)	
5-24 mites / 300 bees, 5-122 mites / 300 bees, 8-24 mites / 300 bees	5 (Autumn)	09/07/26 - Bayvarol x 60 plus 20 mats and mesh, 06/08/26 - Aluen
1 mite / 300 bees	5 (Autumn)	
5 mites / 300 bees	5 (Autumn)	15/07/26 - 390 x Aluen Cap plus 100 mats and 100 mesh
5 mites / 300 bees	5 (Autumn)	as above
22 mites / 300 bees	5 (Autumn)	as above
5 mites / 300 bees	5 (Autumn)	as above
5 mites / 300 bees	5 (Autumn)	23/07/26 - 2 x Bayvarol, 8 mats and 8 mesh
3 mites / 300 bees	5 (Autumn)	
3 mites / 300 bees, 5 mites / 300 bees	5 (Autumn)	21/08/26 - 3 x Bayvarol, 9 mats and 9 mesh

6 mites / 300 bees	5 (Autumn)	Yes, details tba
8		Aluen Cap
12		Aluen Cap
5		Aluen Cap
1 mite / 300 bees	5 (Autumn)	
washing in-progress		
6 mite / 300 bees, 18 mites / 300 bees	5 (Autumn)	25/08/26 - 2 x Bayvarol (8 strips) plus 6 mats and mesh
12-22 mites / 300 bees	5 (Autumn)	14/08/26 - Aluen Cap, 3 (12 strips)
1 mite / 300 bees	5 (Autumn)	
2 mites	5 (Autumn)	
2 mites / 300 bees	5 (Autumn)	
2 mites / 300 bees, 6 mites / 300 bees	5 (Autumn)	26/08/26 - 18 x Bayvarol plus 20 mats and mesh
3 mites / 300 bees	5 (Autumn)	Requested Bayvarol
6 mites / 300 bees	5 (Autumn)	26/08/26 - 56 x Bayvarol plus 30 mats and mesh
5-15 mites / 300 bees	5 (Autumn)	Requested Bayvarol
5-15 mites / 300 bees	5 (Autumn)	Requested Bayvarol
3 mites / 300 bees	5 (Autumn)	Requested Aluen Cap
4-10 mites / 300 bees	5 (Autumn)	28/08/26 - 1100 x Aluen Cap
	5 (Autumn)	28/08/26 - 15 x Aluen Cap plus 30 mats and mesh
	5 (Autumn)	as above
	5 (Autumn)	as above
	5 (Autumn)	as above
	5 (Autumn)	as above

2 mites / 300 bees	5 (Autumn)	
5-6 mites / 300 bees	5 (Autumn)	03/09/26 - 6 x Bayvarol, 18 mats and 18 mesh
12-24 mites / 300 bees	5 (Autumn)	03/09/26 - 3 x Bayvarol, 9 mats and 9 mesh
1 mite / 300 bees	5 (Autumn)	
1 mite / 300 bees	5 (Autumn)	
3-4 mites / 300 bees	5 (Autumn)	Requested Aluen Cap
3-4 mites / 300 bees	5 (Autumn)	Requested Aluen Cap
5 mites / 300 bees	5 (Autumn)	08/09/26 - 700 x Bayvarol, 20 mats and 20 mesh
5 mites / 300 bees	5 (Autumn)	08/09/26 - 2 x Bayvarol, 6 mats and 6 mesh
12 mites / 300 bees	5 (Autumn)	08/09/26 - Clause 6(1)
4 mites / 300 bees	5 (Autumn)	
20-30 mites / 300 bees	5 (Autumn)	

								Total strips issued	131316	30234		
Date	Issuing Officer	Beekeeper	Brand	Product	Location	Resistance L925I/M	Formamidine Resistance Y215H	# Hives / Nucs	Qty of Strips issued	# Treatments issued	Notes	
Aug/Sept 2025	Clause 6(1)	Clause 6(1)	Clause 6(1)	Bayvarol	Clause 6(1)			1502	6008	1502	655 surv. + 627 Queensland hives + 220 WA hives	
10-Oct-25				Bayvarol		Yes, 07/26	Yes, 07/26	100	400	100	Surveillance post C6(1) detection. No mites found.	
25-Nov-25				Bayvarol				179	716	179		
29-Nov-25				Bayvarol				250	1000	250	90 Apivar tratments have been purchased for further treatment of C6(1) load on 6/02/26.	
Dec				Bayvarol				68	272	68		
Dec				Bayvarol				8	32	8		
21-Jan-26				Bayvarol				650	1600	400	Hives required approx 368 - will collect spares at later date	
23-Jan-26				Bayvarol				1	4	1		
30-Jan-26				Bayvarol				44	176	44		
30-Jan-26				Bayvarol				4	16	4		
02-Dec-26				Bayvarol				630	2520	630		
13-Feb-26				Bayvarol				660	2640	660	600 hives and 120 nucs	
13-Feb-26				Bayvarol				2	12	3		
13-Feb-26				Bayvarol				1	4	1		
18-Feb-26				Bayvarol				410	1640	410	400 10f hives and 20 nucs.	
18-Feb-26				Bayvarol				220	880	220	320 hives registered. Only 220 colonies	
24-Feb-26				Bayvarol				630	2520	630	2027 expiry date	
25-Feb-26				Bayvarol				2	8	2		
26-Feb-26				Bayvarol				400	1600	400	1100 registered (1000 colony alive)	
27-Feb-26				Bayvarol				3	12	3		
27-Feb-26				Bayvarol				4	16	4		
12-Mar-26				Bayvarol				40	172	43	40 hives on melon + 3 hives in Clause 6(1)	
05-Mar-26				Bayvarol				600	2400	400		
12-Mar-26				Bayvarol				250	1000	250	250 Hives registered	
12-Mar-26				Bayvarol				450	800	200	Positive detection on Loxton load. Clause 6(1) .	
17-Mar-26				Bayvarol				52	208	52		
19-Mar-26				Bayvarol				850	2800	700		
19-Mar-26				Bayvarol				1300	2400	600		
21-Mar-26				Bayvarol				4000 approx	40	10	Positive detection in escort bees from Clause 6(1)	
26-Mar-26				Bayvarol				1700	6800	1700		
26-Mar-26				Bayvarol				300	1200	300		
08-Apr-26				Bayvarol				4	20.00	5	1 x hive is Clause 6(1)	
13-Apr-26				Bayvarol				480/240	2400.00	600		
14-Apr-26				Bayvarol				200 of 900	800.00	200		
~~23-Apr-26~~				~~Bayvarol~~				~~75 hives + 5 nucs~~	~~312.00~~	~~78~~	Provided 40 mats and 40 mesh also (mid and post treatment monitoring)	28/05/26, BAYVAROL Returned
22-Apr-26				Bayvarol				370	1480.00	370	Clause 6(1)	
24-Apr-26				Bayvarol				600	2400.00	600	Clause 6(1)	
27-Apr-26				Bayvarol			Yes, 05/26	19	76.00	19		
27-Apr-26				Bayvarol				3	12.00	3	6 mats + 6 mesh	
27-Apr-26				Bayvarol				322	1288.00	322	20 mats + 20 mesh	
27-Apr-26				Bayvarol				11	88.00	22	double brood x 11, 15 mats + 15 mesh	
27-Apr-26				Bayvarol				2	8.00	2	2 mats + 2 mesh	
27-Apr-26				Bayvarol				1	8.00	2	doube brood, 3 mats	
27-Apr-26				Bayvarol				3	12.00	3	6 mats + 6 mesh	
27-Apr-26				Bayvarol				4	24.00	6	double brood x 2, 8 mats + 8 mesh	
30-Apr-26				Bayvarol				1	4.00	1	3 mats	
30-Apr-26				Bayvarol				100	40	10	Acaricides to be use for surveillance purposes (with sticky mats) due to robbing behaviour impeding alcohol washing.	
30-Apr-26				Bayvarol				648	2592	648		
04-May-26				Bayvarol				20	80	20	20 x mats and 20 x mesh	
04-May-26				Aluen Cap					420	105		
04-May-26				Aluen Cap					240	60		
04-May-26				Aluen Cap					1320	330		
06-May-26				Aluen Cap				180	720	180		
07-May-26				Bayvarol				248	992.00	248	100 x mats and 100 x mesh	
05-Nov-26				Bayvarol				5	20.00	5	20 x mats and 20 x mesh	
14-May-26				Bayvarol				1	4.00	1	3 x mats and 3 x mesh	
15-May-26				Bayvarol				93 hives + 2 nucs	376.00	94		
18-May-26				Bayvarol				tba, 21/5	tba, 21/5	tba, 21/5	48hr Surveillance - x mats and x mesh	
19-May-26				Bayvarol				900	8000.00	2000	100% double brood boxes (8-10F of bees each) // 1 extra Box of Bayvarol provided Clause 6(1)	
19-May-26				Aluen Cap				900	480.00	120	100% double brood boxes (8-10F of bees each) // 1 box + 2 packs provided Clause 6(1)	
21-May-26				Bayvarol				200	800.00	200		
21-May-26				Bayvarol				740	2400.00	600		
21-May-26				Bayvarol				650	1000.00	250		
21-May-26				Bayvarol				4000 approx	2800.00	700		
21-May-26				Bayvarol				205	400.00	100	Inc nucs // Testing for Varroa this week. Colonies Clause 6(1)	
21-May-26				Aluen Cap				205	420.00	105	Inc nucs // Testing for Varroa this week. Colonies	
25-May-26				Bayvarol				72	288.00	72		
26-May-26				Aluen Cap				675	2700.00	675		
27-May-26				Bayvarol				525	2100.00	525		
28-May-26				Aluen Cap		Yes, 26/05	Yes, 26/05	80	360.00	360	80 mats and 80 mesh.	
28-May-26				Bayvarol				150	600.00	150	Provided Bayvarol for the remaining 150 hives of Clause 6(1) following further varroa detections.	
29-May-26				Bayvarol				26	104.00	26		
02-Jun-26				Bayvarol				1170	4640.00	1160	100 mats and 100 mesh	
02-Jun-26				Aluen Cap				360	1440.00	360		

04-Jun-26	Clause 6(1)	Clause 6(1)	Clause 6(1)	Bayvarol	Clause 6(1)			1	8.00	2	Long langstroth, C 6(1) + 3 mats and mesh
08-Jun-26				Aluen Cap				7	32.00	7	21 mats, 21 mesh
08-Jun-26				Bayvarol				2	8.00	2	6 mats, 6 mesh
10-Jun-26				Aluen Cap				660	1080.00	270	
10-Jun-26				Bayvarol				360	1440.00	360	Clause 6(1)
10-Jun-26				Aluen Cap				600	60.00	15	Surveillance with sticky mats
11-Jun-26				Bayvarol				3	12.00	3	11 mats, 10 mesh
11-Jun-26				Bayvarol				5	20.00	5	15 mats, 15 mesh
11-Jun-26				Bayvarol				5	20.00	5	15 mats, 15 mesh
11-Jun-26				Bayvarol				450	800.00	200	Clause 6(1)
11-Jun-26				Aluen Cap				450	1440.00	360	
11-Jun-26				Aluen Cap				200	840.00	210	
11-Jun-26				Aluen Cap				55	240.00	60	
11-Jun-26				Bayvarol				40	40.00	10	Surveillance with sticky mats
16-Jun-26				Bayvarol				1	4.00	1	3 mats, 3 mesh
19-Jun-26				Apivar		Suspect		180	tba	180	6(1) please confirm qty provided
19-Jun-26				Aluen Cap				1118	3540.00	885	200 mats, 200 mesh
23-Jun-26				Bayvarol				300	1200.00	300	100 mats, 100 mesh
23-Jun-26				Aluen Cap				450	1800.00	450	6(1) please confirm qty provided
23-Jun-26				Aluen Cap				1118	960.00	240	
29-Jun-26				Bayvarol				200	800.00	200	100 mats, 100 mesh
29-Jun-26				Bayvarol		Yes, 20/07	Yes, 20/07	192	768.00	192	100 mats, 100 mesh
03-Jul-26				Bayvarol				2	8.00	2	6 mats, 6 mesh
13-Jul-26				Aluen Cap				768	3072.00	768	100 mats, 100 mesh
10-Jul-26				Bayvarol				60	240.00	60	20 mats, 20 mesh
14-Jul-26				Bayvarol				140	560.00	140	20 mats, 20 mesh
14-Jul-26				Bayvarol				3	12.00	3	
15-Jul-26				Aluen Cap		Suspect		390	1560.00	390	100 mats, 100 mesh
tba				Aluen Cap							6(1) please confirm qty provided
tba				Aluen Cap							6(1) please confirm qty provided
23-Jul-26				Bayvarol				2	4.00	2	8 mats and mesh
24-Jul-26				Bayvarol				234	936.00	234	100 mats, 100 mesh
24-Jul-26				Bayvarol				800	3200.00	800	
24-Jul-26				Aluen Cap				270	1080.00	270	
31-Jul-26				Aluen Cap				960	3840.00	960	
Pending				Bayvarol				62			
04-Aug-26				Aluen Cap				300	1200.00	300	
05-Aug-26				Aluen Cap				112 + 16 nucs	480.00	120	
06-Aug-26				Aluen Cap		Suspect	tba	80	300.00	80	60 hives, 20 nucs
07-Aug-26				Aluen Cap		Yes, 07/26	Yes, 07/26	210	840.00	210	
14-Aug-26				Aluen Cap				3	12.00	3	10 mats, 10 mesh
21-Aug-26				Bayvarol				3	12.00	3	9 mats, 9 mesh
25-Aug-26				Bayvarol				2	8.00	2	6 mats, 6 mesh
26-Aug-26				Bayvarol				18	72.00	18	20 mats, 20 mesh
27-Aug-26				Bayvarol				3	12	3	Bayvarol (Feb), Api-Bioxal, Formic Pro now back to Bayvarol. ADD 9 x mats and 9 x mesh
27-Aug-26				Bayvarol				82	224.00	56	30 mats and 30 mesh
28-Aug-26				Aluen Cap				1100	4440.00		
28-Aug-26				Aluen Cap				360	1200.00		
28-Aug-26				Aluen Cap				15	60.00	15	30 mats and 30 mesh
02-Sep-26				Bayvarol				3	12.00	3	9 mats and mesh
03-Sep-26				Bayvarol				6	24.00	6	18 mats and mesh
03-Sep-26				Bayvarol				3	12.00	3	9 mats and mesh
03-Sep-26				Bayvarol				14	52.00	13	12 hives + 2 nucs, 20 mats and mesh
08-Sep-26				Bayvarol				2	8.00	2	6 mats and 6 mesh
09-Sep-26				Aluen Cap				1430	5760.00	96pkts (1440)	Pending collection, Fri 11/09 Clause 6(1) , multiple washing 6-10 mites / 300 bees. Previously treated with Bayvarol (June 2026)
09-Sep-26				Bayvarol				700	2800.00	700	Pending collection Fri 11/09 - 100 mats, 100 mesh, Clause 6(1) washing 5-15 mites / 300 bees. New loads to existing ve+

Treatment	Sum of # Treatments issued	Count of Product
Bayvarol	21337	85
Aluen Cap	7890	28
Apivar	180	1
Grand Total	**29407**	**114**

Farley, Lisa (PIRSA)

From: Stedman, Michael (PIRSA)
Sent: Sunday, 24 May 2026 1:47 PM
To: Harvey, Adrian (PIRSA)
Subject: Report 22.05.2026 by DN_SA Varroa destructor resistance testing - MS SA I.D.s added under Menangle column 2
Attachments: Report 22.05.2026 by DN_SA Varroa destructor resistance testing - MS SA I.D.s added under Menangle column.docx

OFFICIAL: Sensitive

Hi Adrian, additionally:

We were retesting the Clause 7(1)(c) hives tomorrow, and Clause 6(1) was retesting Clause 7(1)(c) ? apiaries Clause 7(1)(c) , Clause 7(1)(c) , and Clause 6(1) at Taylorville on Thursday. Should we be collecting samples from both asap, and checking mites Nos. for Clause 7(1)(c) ? for possible Aluen Cap treatment.

We will need to:

- let Clause 7(1)(c) know (and also Clause 7(1)(c)), as this may cause complications in that SA beekeepers may now not want to: (i) take hives to or near Clause 7(1)(c) , for almond pollination, or (ii) take on the WA hives after Clause 7(1)(c) pollination,
- let WA DPIRD know, as this may cause complications for trucks and people going back to WA to pick up second loads after dropping off first loads as Clause 7(1)(c) ; whilst we may also need to assist WA DPIRD by ensuring trucks, nets, people etc are decontaminated in SA before re-entering WA,
- decide what to do with the Clause 7(1)(c) sentinel hives as Clause 7(1)(c) won't want them any longer, and I don't believe we should be taking resistant varroa to Murray Bridge (maybe sell to Clause 7(1)(c) ,
- chase up SA beekeeper Clause 6(1) (he was on Clause 7(1)(c)), to see if he picked up resistant varroa.

Regards,

Michael Stedman | Program Co-ordinator, Apiaries
Department of Primary Industries and Regions
Government of South Australia | 33 Flemington Street, GLENSIDE SA 5065
P: +61 8 8429 0872 | **M:** Clause 6(1) | **E:** michael.stedman@sa.gov.au
pir.sa.gov.au

Government of South Australia
Department of Primary Industries and Regions

Service I Professionalism I Trust I Respect I Collaboration & Engagement I Honesty & Integrity I Courage & Tenacity I Sustainability

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

From: Stedman, Michael (PIRSA)
Sent: Friday, 22 May 2026 5:13 PM
To: Harvey, Adrian (PIRSA) <Adrian.Harvey@sa.gov.au>
Subject: Report 22.05.2026 by DN_SA Varroa destructor resistance testing - MS SA I.D.s added under Menangle column

Hi Adrian – SA ID's added in **Menangle Specimen number** column

Suggested next steps - brain dump:

- Develop comms, then revisit source apiaries, resample (note mostly low mite Nos), work with affected beekeepers, and collect original and current sample locations and provide to NSW (they are looking at developing a national heat map),
- Send out comms to industry, and refocus w/shops to commercials and resistance management,
- No changes to entry conditions – as a minimum we should be still slowing the spread,
- At national level? we: (ia) support VIC expedite APVMA approvals for Southern Cross Uni in-field resistance test kit guidelines, and (ib) finalise test kits I proposed, and (ii) push for, and/ or better understand roadblocks to, emergency permit use of Redox oxalic and glycerine strips,
- Review our new acaracide buy (products and numbers - although I think re product options we are on track) (BTW Clause 7(1)(c) have indicated no new chemistry in the pipeline, including with regard to the combined Oxalic/ Formic product I mentioned),
- Review PIRSA policy re undertaking targeted testing for resistance.

Regards,

Michael Stedman | Program Co-ordinator, Apiaries
Department of Primary Industries and Regions
Government of South Australia | 33 Flemington Street, GLENSIDE SA 5065
P: +61 8 8429 0872 | **M:** Clause 6(1) | **E:** michael.stedman@sa.gov.au
pir.sa.gov.au

Government of South Australia
Department of Primary Industries and Regions

Service I Professionalism I Trust I Respect I Collaboration & Engagement I Honesty & Integrity I Courage & Tenacity I Sustainability

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Department of Primary Industries
and Regional Development

22/05/2026

<u>Diagnostic report:</u> Suspect resistance of Varroa mites collected from SA apiaries to synthetic miticides

Samples submitted by:

Michael Stedman,
South Australia Dept. of Primary Industries,
33 Flemington St, Glenside, SA, 5065.
Michael.Stedman@sa.gov.au
Clause 6(1)

ENTO code: ENTO-Varr 96

Menangle Specimen number: Pending

<u>Background:</u>

- Pyrethroid resistance (VGSC target site):

Primarily associated with mutations at position 925 (L925V, L925I, L925M).

  - L925V: common in Europe
  - L925I/M: predominant in North America; also detected with L925V in Türkiye and Greece
  - M918 mutation: less common, also linked to resistance

- Amitraz resistance (Octβ2R target site):

Associated with mutations in the octopamine receptor (Octβ2R), including:

  - Y215H (North America)
  - N87S (France)
  - F290L (Spain)

These mutations likely evolved independently under selection pressure.

<u>Methods:</u>

Genomic DNA was extracted from individual Varroa mites. Detection of resistance-associated mutations was performed using TaqMan SNP genotyping assays. Pyrethroid resistance (e.g. *L925I/M* mutations in the voltage-gated sodium channel) was assessed using allele-specific SNP assays (Affinity Plus format), while amitraz resistance markers were detected using TaqMan assays with MGB-NFQ probes.

All assays were validated using synthetic gene fragments (gBlocks) and reference samples previously confirmed by Sanger sequencing. Positive and negative controls were included in each run to ensure assay performance and result reliability.

Pyrethroid resistance testing was incomplete. The first assay was used to screen Varroa samples as susceptible or resistant-associated. Mutation typing (I vs M) is ongoing.

Results:

See Table 1.

It's important to note that some samples contained very few mites. As a result, the findings may not accurately represent the true resistance frequency of the population. Therefore, the data from these samples should be viewed as indicative or reference only, rather than definitive. Ongoing monitoring is essential to make informed treatment decisions.

Department of Primary Industries
and Regional Development

Table 1. Pyrethroid (L925I/M) and Amitraz (Y215H) resistance profiles in investigated *Varroa destructor* populations

Samples	ENTO lot#	Menangle Specimen number	Pyrethroid resistance			Amitraz resistance			
			Total successfully genotyped	Susceptible (%)	Resistant carriers (%)	Susceptible (%)	Heterozygous (%)	Homozygous (%)	Resistant carriers (%)
Vial 1 - Clause 6(1)	ENTO - Varr 96	SA Clause 7(1)(c) surveillance	3	0%	100%	0%	0%	100%	100%
Vial 2 -	ENTO - Varr 96	SA Clause 7(1)(c) surveillance	3	0%	100%	0%	0%	100%	100%
Vial 3 -	ENTO - Varr 96	SA Clause 7(1)(c) surveillance	1	0%	100%	0%	0%	100%	100%
Vial 4 -	ENTO - Varr 96	SA Clause 6(1) - Clause 6(1) sample R/L	4	0%	100%	0%	0%	100%	100%
Vial 5 -	ENTO - Varr 96	SA Clause 6(1) Clause 6(1) sample R/L	2	0%	100%	0%	0%	100%	100%
Vial 6 -	ENTO - Varr 96	SA Clause 6(1) - Clause 6(1) sample R/L	2	0%	100%	0%	0%	100%	100%
Vial 7 -	ENTO - Varr 96		3	100%	0%	100%	0%	0%	0%
Vial 8 -	ENTO - Varr 96		10	100%	0%	100%	0%	0%	0%
Vial 9 -	ENTO - Varr 96		9	100%	0%	100%	0%	0%	0%
Vial 10	ENTO - Varr 96		2	100%	0%	100%	0%	0%	0%
Vial 11	ENTO - Varr 96	SA Clause 6(1) - Clause 6(1) sample Mt G	10	100%	0%	90%	10%	0%	10%
Total			**49**						

161 Kite Street Orange NSW 2800
Locked Bag 21, Orange NSW 2800
02 6391 3100
dpird.nsw.gov.au

Department of Primary Industries
and Regional Development

Notes:

Susceptible % = % of tested mites that do not carry the resistance mutation and are expected to be controlled effectively by the chemical

Resistant carriers % = % of tested mites that carry at least one copy of the resistance mutation. This includes both heterozygous (one copy) and homozygous (two copies) individuals. This figure indicates the prevalence of resistance in the population.

Heterozygous % = % of tested mites that carry one resistant allele + one susceptible allele

Homozygous % = % of tested mites that carry two copies of the resistance mutation

Acknowledgements

Clause 6(1) **&** Clause 6(1) are thanked for their technical support.

Dr Duong Nguyen

Leader Entomology Insecticide Resistance & Genomics
Plant Biosecurity Research & Diagnostics | Agriculture and Biosecurity
T 02 4640 6389 M Clause 6(1) E duong.nguyen@dpi.nsw.gov.au

References

1. Bahreini, R, González-Cabrera, J, Hernández-Rodríguez, CS, et al. 2025 Arising amitraz and pyrethroids resistance mutations in the ectoparasitic *Varroa destructor* mite in Canada. *Scientific Reports* **15**, 1587.
2. Erdem, E, Koç-İnak, N, Rüstemoğlu, M & İnak, E. 2024 Geographical distribution of pyrethroid resistance mutations in *Varroa destructor* across Türkiye and a European overview. *Exp Appl Acarol* **92**, 309-321.
3. Gonzalez-Cabrera, J., Davies, T.E., Field, L.M., Kennedy, P.J. and Williamson, M.S., 2013. An amino acid substitution (L925V) associated with resistance to pyrethroids in Varroa destructor. PloS one, 8(12), p.e82941.
4. Hubert, J., Nesvorna, M., Kamler, M., Kopecky, J., Tyl, J., Titera, D. and Stara, J., 2014. Point mutations in the sodium channel gene conferring tau-fluvalinate resistance in Varroa destructor. Pest management science, 70(6), pp.889-894.
5. González-Cabrera, J., Rodríguez-Vargas, S., Davies, T.E., Field, L.M., Schmehl, D., Ellis, J.D., Krieger, K. and Williamson, M.S., 2016. Novel mutations in the voltage-gated sodium channel of pyrethroid-resistant Varroa destructor populations from the Southeastern USA. PloS one, 11(5), p.e0155332.

6. Millán-Leiva, A., Marín, Ó., De la Rúa, P., Muñoz, I., Tsagkarakou, A., Eversol, H., Christmon, K., VanEngelsdorp, D. and González-Cabrera, J., 2021. Mutations associated with pyrethroid resistance in the honey bee parasite Varroa destructor evolved as a series of parallel and sequential events. Journal of Pest Science, 94(4), pp.1505-1517.
7. Millán-Leiva, A., Marín, Ó., Christmon, K., Vanengelsdorp, D. and González-Cabrera, J., 2021. Mutations associated with pyrethroid resistance in Varroa mite, a parasite of honey bees, are widespread across the United States. Pest management science, 77(7), pp.3241-3249.
8. Rinkevich, FD, Moreno-Martí, S, Hernández-Rodríguez, CS & González-Cabrera, J. 2023 Confirmation of the Y215H mutation in the β2-octopamine receptor in Varroa destructor is associated with contemporary cases of amitraz resistance in the United States. *Pest Management Science* **79**, 2840-2845.
9. Hernández-Rodríguez, CS, Moreno-Martí, S, Emilova-Kirilova, K & González-Cabrera, J. 2025 A new mutation in the octopamine receptor associated with amitraz resistance in Varroa destructor. *Pest Manag Sci* **81**, 308-315.
10. Mavridis, K, Tsakireli, D, Vlogiannitis, S, et al. 2025 Identification and functional characterization of CYP3002B2, a cytochrome P450 associated with amitraz and flumethrin resistance in the major bee parasite *Varroa destructor*. *Pesticide Biochemistry and Physiology* **210**, 106364.
11. Bertola, M & Mutinelli, F. 2025 Sensitivity and Resistance of Parasitic Mites (*Varroa destructor*, *Tropilaelaps* spp. and *Acarapis woodi)* Against Amitraz and Amitraz-Based Product Treatment: A Systematic Review. *Insects* **16**, 234.

Owner	Apiary location	Suburb	LGA	State	Latitude	Longitude	Number of hives onsite	Number of hives sampled	Sample type	Lab PSL/ BSL/ EMAI	Results resistant/not resistant	Results Genetic Bayvarol	Amitraz resistance
Clause 7(1)(c)	Clause 7(1)(c)	Waikerie		SA	Clause 7(1)(c)	Clause 7(1)(c)	4	4	Mites	EMAI	Resistant	L925I/M	Y215H
Clause 6(1)	Clause 6(1)	Taylorville		SA	Clause 6(1)	Clause 6(1)	1	1	Mites	EMAI	Resistant	L925I/M	Y215H
Clause 6(1)	Clause 6(1)	Taylorville		SA	Clause 7(1)(c)	Clause 7(1)(c)	1	1	Mites	EMAI	Resistant	L925I/M	Y215H
Clause 6(1)	Clause 6(1)	Taylorville		SA	Clause 7(1)(c)	Clause 7(1)(c)	1	1	Mites	EMAI	Resistant	L925I/M	Y215H

History:

Mites detected in hives at Clause 7(1)(c) n Sept 2025 were submitted to EMAI for species confirmation, being the first varroa detected in SA. These same mites were re-tested by EMAI for acaracide resistance in early 2026 and found to carry both resistant markers.

These mites came from hives belonging to Clause 6(1) phone: Clause 6(1) email: Clause 6(1) having been transported by Clause 7(1)(c) QLD 4280, QLD 4505, phone: Clause 7(1)(c) Clause 7(1)(c) into SA

Sentinel hives placed at Clause 7(1)(c) post Sept 2025 showed mites on sticky mats for the first time in April 2026, being subsequently sent for resistance testing in May 2026.

Beekeeper Clause 6(1) lives approximately 20 km from Clause 7(1)(c) where she keeps some 20-30 hives, the remainder being kept at sites throughout the Riverland, including it is believed as close as approximately 13 km from Clause 7(1)(c). Whilst the 3+ hives are not believed to have moved from her home address, PIRSA is still trying to clarify if exchange material (including swarms, supers, etc) from closer to Clause 7(1)(c) was in fact the source of the infection.

Minimal details are available to date on the small mite sample found at this stage to have just partial resistance to SPs.

Farley, Lisa (PIRSA)

From: Stedman, Michael (PIRSA)
Sent: Wednesday, 27 May 2026 7:58 PM
To: Harvey, Adrian (PIRSA)
Subject: RE: Request for assistance - Clause 6(1)
Attachments: Draft Bio-notice text 27_05_2026 - MS comments.docx

OFFICIAL: Sensitive

My comments.

Not sure if resistance detections on a heat map (same or different map) are of value.

Regards,

Michael Stedman | Program Co-ordinator, Apiaries
Department of Primary Industries and Regions
Government of South Australia | 33 Flemington Street, GLENSIDE SA 5065
P: +61 8 8429 0872 | **M:** Clause 6(1) | **E:** michael.stedman@sa.gov.au
pir.sa.gov.au

Government of South Australia
Department of Primary Industries and Regions

Service | Professionalism | Trust | Respect | Collaboration & Engagement | Honesty & Integrity | Courage & Tenacity | Sustainability

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

From: Harvey, Adrian (PIRSA) <Adrian.Harvey@sa.gov.au>
Sent: Wednesday, 27 May 2026 1:43 PM
To: Stedman, Michael (PIRSA) <Michael.Stedman@sa.gov.au>
Subject: RE: Request for assistance - Clause 6(1)

OFFICIAL: Sensitive

Yep agree , trying to get something out this week
Been msg with Con P , he would like minster to approve comms
Heres draft bio notice text

Biosecurity Notice

In mid April 2026, NSW DPIRD confirmed hives with varroa mite treatment resistance, their tracing revealed a link to SA's initial varroa incursion at Pooginook in September 2025. In response to this tracing PIRSA collected and submitted samples for analysis for treatment resistance, with the results being positive for the presence of resistance genes/alleles for synthetic pyrethroids (L925I/M) and amitraz (Y215H).
Samples were collected from sentinel hives and from a beekeeper with hives known to have been within the buffer at the time. Both the sentinel hives and the beekeeper hives have only detected varroa since late April, with below threshold mites observed in recent washes and sticky mat monitoring.
Samples were supplied to the Elizabeth McArthur Agricultural Institute (EMAI) for analysis
PIRSA is investigating the potential extent of resistance in the Riverland region and seek that if beekeeper observe treatment failure or reduced efficacy of treatment to please contact the Apiary Unit.
PIRSA has stock of acaricides, both synthetic and organic products and is securing further stock to continue to assist registered beekeeper with treatments out to June 2027.
It is now more important than ever that beekeepers continue to undertake monitoring, particularly pre, mid and post treatment to allow assessment of treatment effectiveness. Synthetic products are still effective the majority of situations and should not be discounted or discouraged from being used.
If resistance is being observed in your local area, then it would be prudent to focus on utilising organic derived products i.e thymol/ formic acid / oxalic acid for varroa treatment.
An rapid field test procedure for resistance is being developed.
Treatment resistance is considered to be widespread across southern QLD, NSW. In mid May Victoria notified States and Territories that it had had a detection of synthetic pyrethroid resistance (L925I) with the extent being investigated.
If seeking further information please contact our

- Industry Engagement & Capability Officer, Josh D'Ambrosio (aka VDO), Clause 6(1)
- Bee Biosecurity Officer (BBO), Davide Stella Clause 6(1)
- Apiary email box – pirsa.beebiosecurity@sa.gov.au

Adrian Harvey
Program Manager – Apiary Unit | Biosecurity
Department of Primary Industries and Regions
P: +61 8 7085 1778 | **M:** Clause 6(1) | **E:** adrian.harvey@sa.gov.au
pir.sa.gov.au

Please direct apiary enquiries to: pirsa.beebiosecurity@sa.gov.au

Clause 7(1)(c)

Clause 7(1)(c)

Regarding your proposed timeline of industry notification by the end of next week – I would suggest we will get heavily criticised if industry isn't advised this week, especially as:

- brokers and beekeepers are at the moment making decisions about where to place interstate hives. At least one broker is trying to designate one of their orchards as the 'interstate orchard', and Pomona (next to Jubilee) as their 'SA orchard'; when it would likely be preferred now by SA beekeepers to be the other way round,
- The WA DPIRD, Clause 7(1)(c) , and Clause 7(1)(c) are in the middle of planning movements and placements, whilst Clause 7(1)(c) is also in the middle of actively signing up SA beekeepers to manage their WA bees once pollination is finished – with SA beekeepers most likely not wanting to be involved once they find out they may also get resistant varroa off the orchard,
- The two Clause 6(1) beekeepers (Clause 6(1) and Clause 6(1) already know.

Regards,

Michael Stedman | Program Co-ordinator, Apiaries
Department of Primary Industries and Regions
Government of South Australia | 33 Flemington Street, GLENSIDE SA 5065
P: +61 8 8429 0872 | **M:** Clause 6(1) | **E:** michael.stedman@sa.gov.au
pir.sa.gov.au

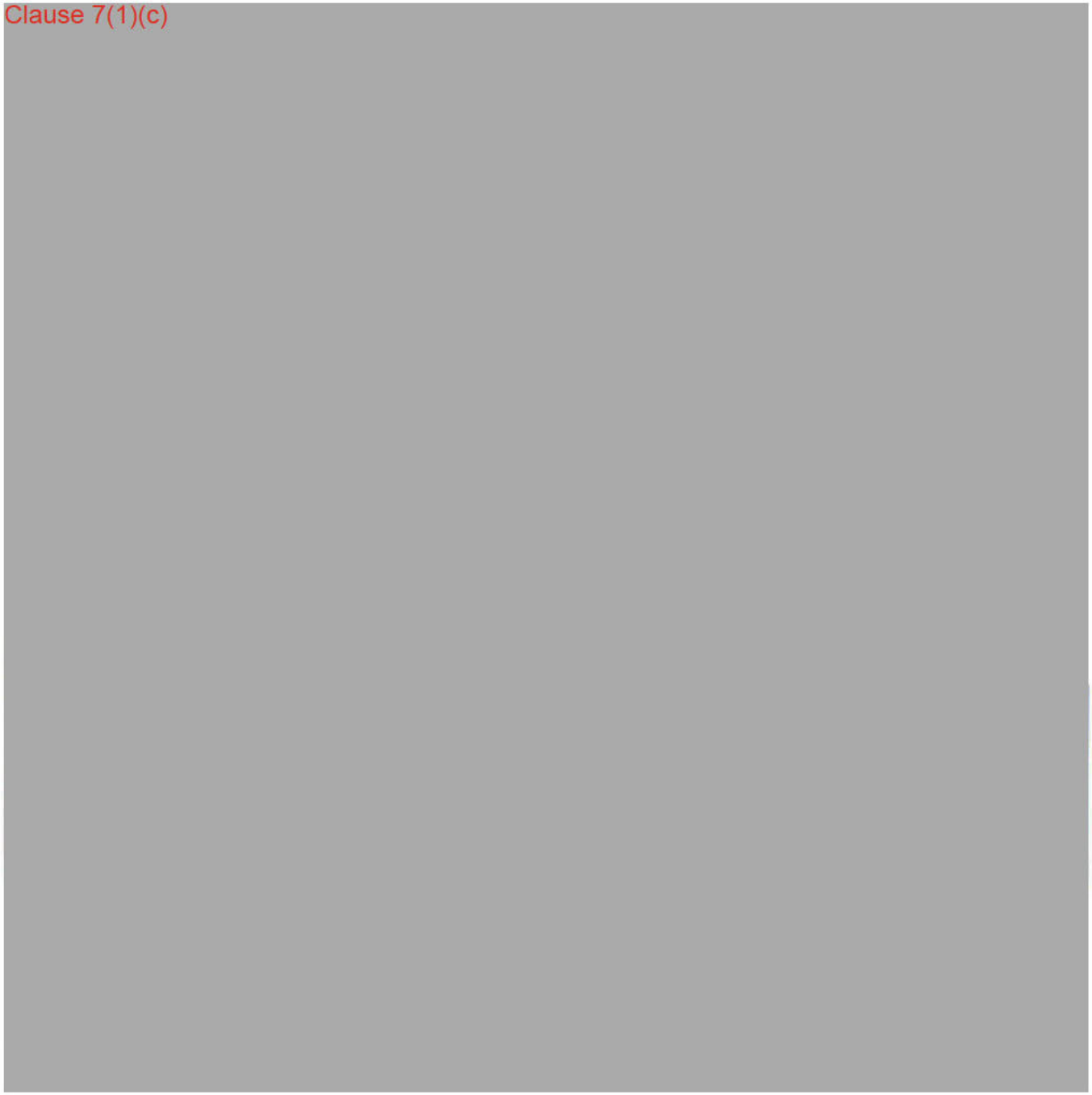




Service I Professionalism I Trust I Respect I Collaboration & Engagement I Honesty & Integrity I Courage & Tenacity I Sustainability

Disclaimer: The information in this e-mail may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

Clause 7(1)(c)


Clause 7(1)(c)

Government of South Australia
Department of Primary Industries and Regions

Minute to
Minister for Primary Industries and Regional Development
Minister for Forest Industries

Ref: A7474002

For	**Noting**
Critical Date	**Urgent**
Subject	**Varroa treatment resistance confirmed in SA**

Synopsis

This minute provides you with an update on varroa mite treatment resistance that has recently been confirmed in South Australia. Varroa mite treatment resistance is currently being observed across southern Qld, throughout NSW and in Victoria. SA confirmation was received on Friday 22 May 2026 and arose from samples collected and submitted by PIRSA for testing as a follow up to tracing from recent NSW treatment resistance notification.

Recommendations

That you:

1. Note the brief.

   NOTED

.....

Hon Clare Scriven MLC

Minister for Primary Industries and Regional Development

Minister for Forest Industries

/ / 2026

Ministerial Comments -

Background

- Varroa mite, the most serious biosecurity threat to Australia's honeybee industry, was detected at the Clause 6(1) on 22 June 2022 through routine surveillance.
- A national eradication response was implemented from June 2022 to September 2023, when the response moved to a national transition to management program focussing on beekeeper and industry preparedness, which has since concluded on 6 Feb 2026.
- Varroa mite is considered established in Australia with varroa occurring in New South Wales, Victoria, Queensland, ACT and South Australia.
- The first South Australian detection of varroa mite occurred at Pooginook in the Riverland on 2 September 2025, linked to hives that had met entry requirements from Queensland; initially, no further related detections were identified through tracing or surveillance. Sentinel hives were established on site following the incursion and only recently have had varroa detected in them.
- A separate detection of varroa mite was confirmed on 20 November 2025 near [redacted] in the Limestone Coast. Clause 6(1)
- Varroa detections have now occurred across multiple regions, including the Limestone Coast, Riverland, Adelaide Hills, Fleurieu, Yorke and Eyre Peninsulas, Mid North and Southern Flinders.
- Previous briefing on this topic includes A7474002.

Varroa Treatment resistance

- In January 2026 New South Wales Department of Primary Industries and Regional Development (NSW DPIRD) was alerted to a varroa treatment failure where the application of synthetic pyrethroids (Bayvarol/ Apistan) miticide failed to adequately suppress varroa mites at a location on the mid north coast of NSW.
- NSW DPIRD collected samples with diagnostics conducted at EMAI by their chemical resistance team and resistance alleles to both synthetic pyrethroid and Amitraz based synthetic miticides (Apivar/Apitraz) was confirmed.
- On 16 April 2026, NSW DPIRD provided information to CCEPP regarding the detection of treatment resistance and a suspected 2nd incursion of varroa mite into Australia.
- On 13 May 2026, Victoria notified all states and territories that it had a decision of treatment resistance to the synthetic pyrethroid only.

South Australian connection

- Tracing conducted by NSW DPIRD identified hives associated with the detection that was made in the SA Riverland (Pooginook) in September 2025.
- Those hives entered from QLD into SA on 24/07/25, mites were detected on 02/09/25 and hives were directed out of the State on 09/09/25 to a location at Clause 6(1) [redacted]
- NSW have retested those hives, and they have tested positive for resistance to synthetic pyrethroids and amitraz products.

- Until recently, PIRSA was confident the Pooginook detection did not establish in SA, based on surveillance of beekeepers and feral bee colonies within 25km of the detection and the installation of sentinel hives at the site where the QLD hives were located not finding any evidence of mites. Testing was taken out to 60-days without establishment.
- However, in response to the tracing notification from NSW re the SA connection to resistant strains. PIRSA sampled the sentinel hives at Pooginook again and very low mite numbers were detected, indicating varroa had recently infected the hives. Suspected varroa mite samples were also collected from a beekeeper that had been within the original 25km buffer around the initial Pooginook detection that had recently detected varroa mite in their hives at Clause 6(1) (approx. 20km from Pooginook).
- The samples were sent to the Elizabeth Macarthur Agricultural Institute (EMAI) in NSW for analysis, with the result being received Friday 22 May 2026.
- The results indicate that the samples from both the sentinel hives and beekeepers have tested positive resistant genes to both synthetic pyrethroid and amitraz.
- Clause 9(1)
- Euthanasia is NOT standard practice for resistant mites; treatment options are available and will be offered to affected beekeepers.
- PIRSA has stock of treatments which are effective against resistant mites and is securing further stocks.

Discussion

- The extent of the treatment resistance in NSW and southern QLD is considered to be widespread, while AGVIC are investigating the extent of their recent detection; it is however expected to spread through varroa populations as beekeepers undertake routine operations and movements.
- As acaricide resistance in varroa mites becomes widespread, apiarists will lose key control tools, and there becomes an increased risk of high mite loads and colony losses. This is tempered by the knowledge that there still exists alternate physical and chemical treatment options to manage Varroa.
- AHIBIC the national apiary representative body, continue to lobby and encourage manufacturers to apply to the APVMA for permit and registration of additional varroa treatment products e.g. Norroa and mixes of formic and oxalic acids.

- National talking points have been developed to reflect treatment resistance. Key messaging includes:
    - Resistance is being observed in SE QLD and NSW.
    - Implementing best practice chemical management by rotating to a different mode of action for each treatment
    - The synthetic pyrethroids (Bayvarol/Apistan) and Amitraz (Apitraz/Apivar) products are still being used with effect in QLD & NSW, Vic and SA and should still be considered as a treatment option as a part of an integrated pest management plan.
    - Monitoring pre, mid and post treatment for effectives and reporting non effective treatments to your state agency.
- SAVIAC initially discussed the interstate resistance issue at meeting on 18th Feb 2026 following the January report of synthetic pyrethroid resistance and further discussed the issue and national actions at its meeting 6 May 2026.
- PIRSA recently received grant funding from the Thriving Regions fund to secure additional suite of acaracide treatments, both synthetic and organic options treatment product. The grant funding also supports the ongoing provision of varroa management advice though our Varroa Development Officers (VDO).
- A Biosecurity notice has been drafted to inform industry of the resistance found in SA.

Stakeholder / regional impacts, consultation and engagement

- Beekeepers are supported through regular updates, a surveillance heat map based on voluntary reporting, and ongoing online and face to face engagement led by PIRSA's Apiary Unit.
- Apiary Unit VDO continue to deliver monthly webinar update which are keenly received by SA beekeepers, e.g. recent webinar on 15 Apr 2026, had 118 beekeepers in attendance.
- PIRSA continue to issue monthly Biosecurity Notice last issued on 16 Apr 2026 that included details of varroa resistance and links to jurisdictional (QLD/NSW and industry AHBIC media releases, with the most recent notice released on 21 May 2026.
- CCEPP has updated the National Talking Points.

Management of key risks

- Beekeepers are being encouraged to implement best practice management in relation to the use of acaricide treatments i.e. not to use same product back to back, ensure the mode of action is changed for each treatment and monitoring treatment effectiveness and report any treatment failures.
- PIRSA has a stock of acaricides to enable treatment of resistant varroa mite population. These treatments continue to be provided to registered beekeepers who undertake their legal obligation to notify PIRSA of the presence of mites.

Legislative and/or financial implications

- Nil

Attachment

- nil



DEPUTY CHIEF EXECUTIVE
Department of Primary Industries and Regions

28 / 05 / 2026

CONTACT	Nick Secomb
POSITION	A/Executive Director
DIVISION	Biosecurity
MOBILE and LANDLINE	Clause 6(1)
Cleared by	Con Poulos, Director Animal Biosecurity

Farley, Lisa (PIRSA)

From: Poulos, Con (PIRSA)
Sent: Friday, 29 May 2026 12:25 PM
To: Secomb, Nick (PIRSA); Harvey, Adrian (PIRSA)
Subject: RE: FOR REVIEW and APPROVAL Biosecurity Notice - PIRSA is investigating potential resistance varroa in Riverland region

OFFICIAL

Also need to change this line about this week.

Samples collected from the SA Riverland were supplied to the Elizabeth McArthur Agricultural Institute in NSW for analysis and this week reported as **positive for the presence of the genetic markers L925I/M and Y215H.**

From: Secomb, Nick (PIRSA) <Nick.Secomb@sa.gov.au>
Sent: Friday, 29 May 2026 12:23 PM
To: Harvey, Adrian (PIRSA) <Adrian.Harvey@sa.gov.au>
Cc: Poulos, Con (PIRSA) <Con.Poulos@sa.gov.au>
Subject: RE: FOR REVIEW and APPROVAL Biosecurity Notice - PIRSA is investigating potential resistance varroa in Riverland region

OFFICIAL

Hi Adrian

As just discussed, can you please add one para to the red text below outlining briefly what surveillance we did at this site before May 2026?

Could you please let me know if you can't get to this ASAP?

thanks

nick

From: Collins, Jo (PIRSA) <Jo.Collins@sa.gov.au>
Sent: Friday, 29 May 2026 12:17 PM
To: Wright, Joanna (PIRSA) <Joanna.Wright@sa.gov.au>; Secomb, Nick (PIRSA) <Nick.Secomb@sa.gov.au>
Cc: Roberts, Cindy (PIRSA) <Cindy.Roberts@sa.gov.au>; Wallis, Brooke (PIRSA) <brooke.wallis2@sa.gov.au>
Subject: RE: FOR REVIEW and APPROVAL Biosecurity Notice - PIRSA is investigating potential resistance varroa in Riverland region

OFFICIAL

Clause 9(1)

Jo

From: Wright, Joanna (PIRSA) <joanna.wright@sa.gov.au>
Sent: Friday, 29 May 2026 11:44 AM
To: Collins, Jo (PIRSA) <Jo.Collins@sa.gov.au>
Cc: Roberts, Cindy (PIRSA) <Cindy.Roberts@sa.gov.au>; Wallis, Brooke (PIRSA) <brooke.wallis2@sa.gov.au>
Subject: FOR REVIEW and APPROVAL Biosecurity Notice - PIRSA is investigating potential resistance varroa in Riverland region

OFFICIAL

Hi Jo,

FOR REVIEW APPROVAL by 1pm Fri 29 May
TOPIC: Varroa Bio Notice – Resistance varroa mite detection
DATE: 29 May 2026
DISTRIBUTION: 1 June via eDM Apiary beekeeper list and industry list – pending CE/Minister's Officer confirmation
APPROVED BY: Nick Secombe, Con Poulos, Adrian Harvey and Josh D'Ambrosio
ADDITIONAL APPROVALS TO FOLLOW: Mehdi Doroudi, MO

For progressing to Minister's Office/CE for approval prior to release. Minute currently with MO.

Many thanks

Jo Wright | Senior Communications Partner
Industry, Strategy and Partnerships | **Department of Primary Industries and Regions**
Government of South Australia | Level 21, 11 Waymouth St
GPO Box 1671 Adelaide SA 5001
M: Clause 6(1) | **E:** joanna.wright@sa.gov.au
pir.sa.gov.au

Part Time: Tues - Fri from 8am to 4pm

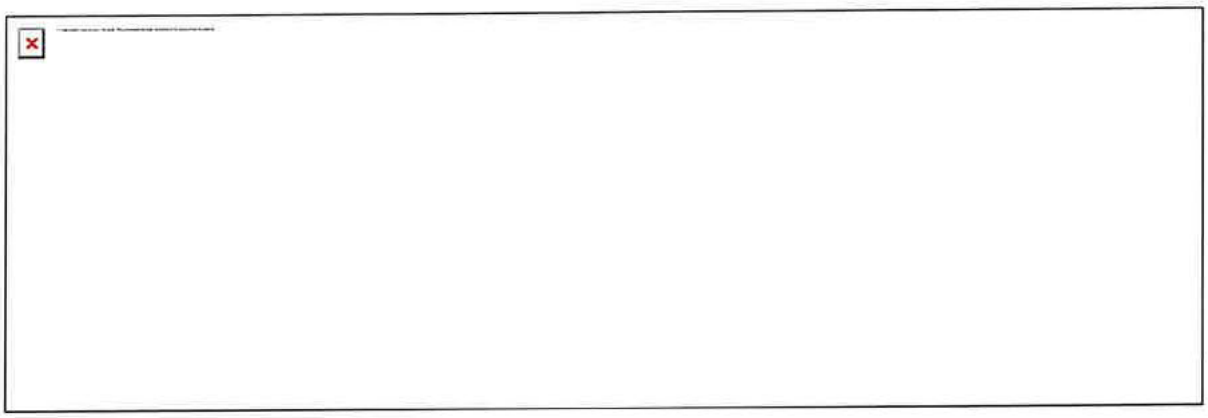


The Department of Primary Industries and Regions cares for the Country and communities of South Australia.
We ensure the land, sea, water and sky are healthy for future generations and strive to better understand their spiritual and cultural significance for Aboriginal people across the state.
In the spirit of reconciliation, our commitment is to build progressive and trusting relationships, to share knowledge and learn from each other.
We recognise and own a difficult past, and together we will walk forward. We acknowledge the many Aboriginal people of this Country as the oldest continuous living culture in the world.

Disclaimer: The information in this email may be confidential and/or legally privileged. Use or disclosure of the information by anyone other than the intended recipient is prohibited and may be unlawful.

From: Department of Primary Industries and Regions (PIRSA) <PIRSA.beebiosecurity@sa.gov.au>
Sent: Friday, 29 May 2026 11:40 AM
To: Wright, Joanna (PIRSA) <joanna.wright@sa.gov.au>
Subject: Biosecurity Notice - PIRSA is investigating potential resistance varroa in Riverland region

View this email in your browser



1 June 2026

Biosecurity Notice

You are receiving this email as you are registered or have recently been registered with the Department of Primary Industries and Regions (PIRSA) as a beekeeper.

Resistance varroa mite detection update

Samples collected from the SA Riverland were supplied to the Elizabeth McArthur Agricultural Institute in NSW for analysis and this week reported as **positive for the presence of the genetic markers L925I/M and Y215H.** These are the known mutations that have been detected in chemically resistant varroa interstate and result in chemical resistance to synthetic pyrethroids (eg. Apistan/ Bayvarol), and formamidines (eg. Amitraz/ Apivar).

PIRSA is investigating the potential extent of resistant varroa in the Riverland region, and requests that beekeepers who have noted apparent synthetic pyrethroid or formamidine acaracide treatment failure (based on comparing varroa mite counts via alcohol wash testing at treatment start-point - when treatment applied, treatment mid-point, and treatment end-point - when treatment removed), to contact the Apiary Unit.

Background:

Clause 9(1)

In mid-April 2026, the New South Wales Department of Primary Industries and Regional Development notified PIRSA that their tracing of the spread of acaracide resistance varroa in New South Wales and Queensland had revealed a link to SA's initial varroa incursion within the Pooginook Detection Zone in September 2025.

In response to this trace, and after repeat sampling, PIRSA collected mite samples from existing sentinel hives within the Pooginook Detection Zone, along with mites from a beekeeper with hives known to have been within this zone at the time of the initial detection. These samples have tested positive for the presence of the genetic markers L925I/M and Y215H.

Synthetic pyrethroid and formamidine acaracide resistance is becoming more widespread in southern Queensland and New South Wales, whilst in mid-May Victoria reported it was investigating the extent of its first detection of synthetic pyrethroid resistance.

On-going management:

PIRSA continues to supply registered SA beekeepers who have notified the presence of varroa, and who are at threshold, with options of synthetic or organic

acaracides.

Beekeeper actions:

With the potential for both varroa re-invasion and acaracide resistance, it is now more important than ever that beekeepers:

- regularly test their hives,
- only treat when at seasonal threshold,
- select, use and rotate between APVMA registered acaracides, following label/ permit directions,
- incorporate non-chemical treatments,
- keep records of test and treatment details, including identifying tested and treated hives, and
- report suspected resistance to the PIRSA Apiary Unit.

As in New South Wales and Queensland, both synthetic pyrethroid and formamidines based acaracides continue to remain very effective against the susceptible population (which in South Australia is likely virtually all of the varroa population, except for a few localised pockets), and should not be discounted in a rotation of treatment for the management of varroa mite.

Several options are available for both laboratory confirmation and in-field indications of synthetic pyrethroid and formamidine resistance, with one current in-field method being to compare varroa numbers via alcohol wash testing during treatment when using synthetic pyrethroid or formamidine based treatments, with comparative testing undertaken at treatment start-point, treatment mid-point and treatment end-point.

PIRSA Varroa contacts

PIRSA Biosecurity - Apiary Unit
Phone: **(08) 8207 7900** (PIRSA Glenside)
Email: PIRSA.beebiosecurity@sa.gov.au

Varroa Development Officer
Josh D'Ambrosio
Mon – Fri
Phone: Clause 6(1)
Email: joshua.d'ambrosio@sa.gov.au

Bee Biosecurity Officer
Davide Stella
Phone: Clause 6(1)
Email: davide.stella@sa.gov.au

Program Coordinator, Apiaries
Michael Stedman
Phone: Clause 6(1)
Email: michael.stedman@sa.gov.au

Events and learning opportunities

All face-to-face events and online webinars are listed on the PIRSA Eventbrite page. By registering with Eventbrite, you will receive notifications about upcoming sessions.

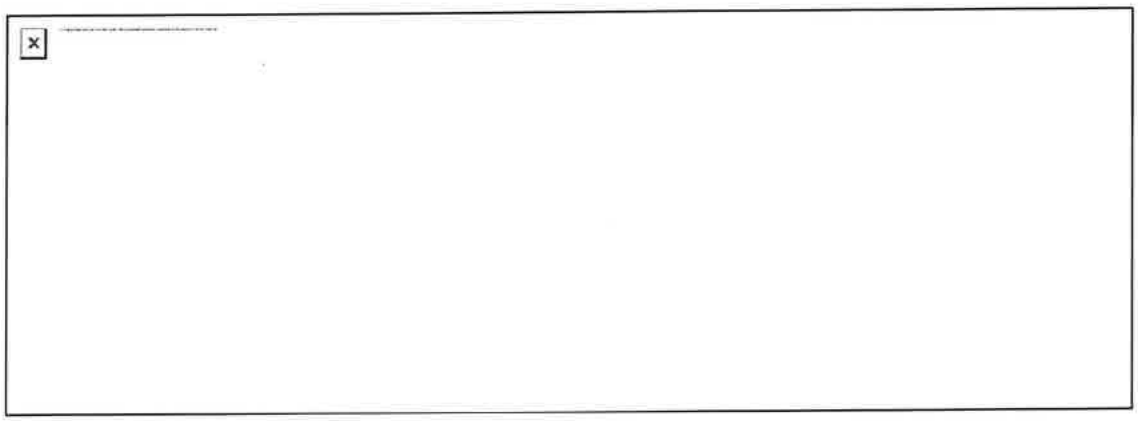
Our last webinar was attended by over 145 beekeepers, highlighting the strong interest across the industry.

Josh will be visiting Warooka on the Yorke Peninsula on Friday 5th June for the AGRI breakfast. Please register via the Eventbrite below if you would like to attend.

Yorke Peninsula AGRI. Breakfast and Beekeeper Meet-Up Tickets, Friday, June 5 • 8 AM - 9:30 AM | Eventbrite

If you're seeking general information, want to refresh your knowledge or are looking for more technical detail on a subject, please visit www.varroa.org.au

Upcoming events:



How to report suspected varroa mites

If you detect or suspect varroa mite in your hives:

Email: PIRSA.beebiosecurity@sa.gov.au

Or call the **Exotic Plant Pest Hotline 1800 084 881**

FaB Mentors

The Family and Business (FaB) Mentors provide free independent, and confidential support to primary producers, including beekeepers, across South Australia. FaB Mentors offer a listening ear and can connect you with a range of assistance options, such as financial counselling, emotional wellbeing services and government support services. Whether you are facing industry challenges, adverse weather conditions or market fluctuations, FaB Mentors can help you navigate available resources.

The FaB team has a diverse variety of business and agricultural backgrounds. Contact any of the mentors and they will link you to the most appropriate assistance.

See here for further information and contact details.

Missed a Biosecurity Notice?

If you have missed a biosecurity notice, all past and current notices are available to view on the PIRSA Varroa webpage, under the *Response in South Australia* section, in the *Industry Updates and Information* drop down box.

Do you know someone who keeps bees and may need a reminder to register?

By law, all beekeepers must be registered to keep bees and maintain hives.

Any person keeping honey bees, whether it's a single backyard hive or a commercial operation, must register annually.

Registration enables PIRSA to contact you with urgent biosecurity alerts (e.g. varroa mite), supports industry protection by tracking pests and diseases and provides access to VDO supports, educational materials and workshops.

Encourage them to register if they have not already by signing up through our website today.

Are your details up to date?

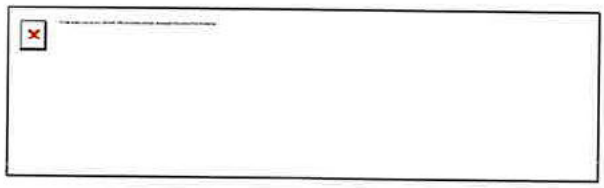
As a registered beekeeper, you receive the latest information on training events and opportunities including any biosecurity concerns for the apiary industry.

If you have changed your address or any other contact details, you need to notify PIRSA by completing the change of ownership or address form and emailing it to PIRSA.picregistrations@sa.gov.au

More information

- PIRSA
- National Varroa mite Management Program
- Australian Honey Bee Industry Council (AHBIC)
- Australian Government

Do you know a beekeeper who doesn't receive these updates? Encourage them to register if they have not already, and sign up through our website.





Why did I get this? · Unsubscribe from this list · Update subscription preferences · Share the newsletter
Primary Industries and Regions SA · 11 Waymouth Street · Adelaide, SA 5000 · Australia

Security Classification: 01 Public

