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Department of
**Primary Industries and
Regional Development**



Cattle
Industry Funding Scheme

Cattle Industry Funding Scheme

Annual Report



2021/2022

Images:

Image 7 © Nathan Dyer

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October 2022

Important disclaimer

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Image 1 – Black Angus cattle

List of acronyms

BAM Act	<i>Biosecurity and Agriculture Management Act 2007</i>
c-strain	cattle strain
CIBFSA	Cattle Industry Biosecurity and Food Safety Association
CICA	<i>Cattle Industry Compensation Act 1965</i>
CICF	Cattle Industry Compensation Fund
DNA	deoxyribonucleic acid
DPIRD	Department of Primary Industries and Regional Development
EBL	enzootic bovine leucosis
ELISA	enzyme-linked immunosorbent assay
FMD	foot and mouth disease
HT-J PCR	high throughput polymerase chain reaction
IFS	Industry Funding Scheme
JD	Johne's disease
LSD	lumpy skin disease
MAP	<i>Mycobacterium avium</i> subspecies <i>paratuberculosis</i>
NGS	next generation sequencing
NLIS	National Livestock Identification System
PIC	property identification code
WA	Western Australia

From the Chair

I am pleased to present the 2021/22 Cattle Industry Funding Scheme (IFS) annual report to the Scheme participants, stakeholders involved in our industry and to the Minister for Agriculture and Food.

In a year of heightened awareness of cattle biosecurity, the Cattle IFS has continued its work to support the biosecurity of Western Australia's (WA) beef and dairy industries. The IFS-funded disease surveillance programs facilitate early detection of priority cattle diseases – the earlier a disease is detected, the greater the chance that it can be managed or eradicated as determined by industry. This work is complemented by the IFS-funded National Livestock Identification System (NLIS) cattle helpdesk – an important resource WA cattle producers can draw upon to ensure the traceability of their animals is maintained and correctly recorded. This service is unique in Australia and has contributed to WA consistently achieving the highest levels of NLIS compliance.

Livestock traceability is paramount. With the detection of Johne's disease (cattle strain) in a herd in the south-west early in the financial year and the incursions of foot and mouth disease and lumpy skin disease into Indonesia in early 2022, robust traceability systems mean that we have a much greater chance of being able to track, trace and intervene in potential disease spread across WA and Australia.

The recent disease incursions serve as a reminder of the need for us, as cattle producers and collectively as an industry, to do all that we can to ensure the biosecurity of our properties and herds. We all have a part to play in reducing the risk of pests and diseases entering and spreading, including reporting suspect pests or illness in our animals. WA producers are in a fortunate position – we can draw upon the Cattle IFS to help address priority biosecurity risks to our industry, as well as compensate producers under certain circumstances.

This year sees the end to my tenure on the Cattle IFS Management Committee. As a committee member and as Chair, I have seen many positive changes over the last six years. We have continually strived to operate in such a way to ensure transparent and robust decision-making and good governance, and to make certain the IFS is being used to deliver programs that meet the expectations and needs of the WA cattle industry as a whole. During my time on the Committee, we have had to make some hard decisions but the engagement and considered debate from across WA's diverse cattle industry and stakeholders was encouraging. I am sure the Committee will build on this as it puts its new engagement and communications strategy into action.

On that note, I would like to thank my fellow Committee members for their enthusiasm and passion for the biosecurity of our industry, and the DPIRD staff that make the IFS and its programs so successful. At the time of writing this report the new Chair has been appointed and I welcome Debbie Dowden to the position. I know she has the capacity and integrity to continue to provide leadership to this committee and the industry.

I'm heartened by the support that the IFS receives from cattle and dairy producers across Western Australia and your commitment to the biosecurity of our industry.



Steve Meerwald
Chair (to 30 June 2022), Cattle IFS Management Committee



1. Overview of the Cattle Industry Funding Scheme

The Cattle Industry Funding Scheme (IFS) has been operating since 2010 to address biosecurity threats relevant to the Western Australian (WA) cattle industry. The Scheme is established by regulation under the *Biosecurity and Agriculture Management Act 2007* (BAM Act) to enable cattle producers to identify the pest and disease priorities at a whole-of-industry level and raise funds for activities to address these priorities.

There are currently three Industry Funding Schemes in operation. In addition to the Cattle IFS, there is a Sheep and Goat IFS and a Grains, Seeds and Hay IFS. The three IFSs operate in a similar manner.

For the Cattle IFS, funds are raised through a producer contribution on each chargeable sale. A 'chargeable sale' is the sale of cattle (live or carcasses) that are located on a property within the Scheme's area of operation or moved from the property for the purpose of offering them for sale/slaughter.

Producers do not have to participate in the Scheme – there is a mechanism that allows them to opt out. Opting out does not remove the legal requirement for landholders to deal with the pests and diseases being targeted by the Scheme but it does disqualify the producer from receiving any benefits provided by the Scheme, such as on-ground assistance and compensation.

A seven-member Industry Management Committee oversees the Cattle IFS. The Minister for Agriculture and Food appointed the committee members after inviting nominations and receiving advice from an industry-based Appointments Committee. As required by regulation, the majority of the Industry Management Committee are full participants of the Cattle IFS.

The Industry Management Committee is responsible for approving payments made from the IFS Account and approving the biosecurity-related programs funded through the Scheme. It also provides advice to the Minister on the Scheme's area of operation and the contribution rate.

In addition, the Industry Management Committee oversees the funds previously held in the Cattle Industry Compensation Fund (CICF), a fund established under the *Cattle Industry Compensation Act 1965*. This money was transferred to the IFS Account in 2010. Throughout this report, these funds are referred to as the 'ex-CICF funds'.

The State Government, through its Department of Primary Industries and Regional Development (DPIRD), provides the necessary support to ensure proper governance and the effective operation of the Scheme and Management Committee. This includes secretariat, communications, policy and technical advice, as well as financial accounting and reporting. Furthermore, the normal regulatory inspection and compliance activities undertaken by DPIRD closely complement the priorities of the Management Committee.

2021/22 Cattle Industry Funding Scheme at a glance

During 2021/22:

- Contributions of 20 cents per head/carcass applied to the sale of all cattle produced in WA
- IFS contributions totalling \$100,881 were received
- IFS funds totalling \$54,204 were used to undertake surveillance for Johne's disease in cattle, enzootic bovine leucosis and bovine tuberculosis
- Committee expenses were \$10,148
- Two producers opted out of the Scheme. Neither applied to have their IFS contributions refunded
- \$134,062 ex-CICF funds were used to fund the WA helpdesk for the National Livestock Identification System (NLIS). One-third of these costs were recovered from the Cattle Industry Biosecurity and Food Safety Association
- The Biosecurity Traceability and Communications project concluded, with expenditure of \$4851 during the year

Key achievements:

- Reviewed and refreshed the Cattle IFS Management Committee's strategic plan
- Completed the Biosecurity Traceability and Communications project
- No detections of bovine tuberculosis or enzootic bovine leucosis
- Responded to more than 15,000 telephone and email enquiries to support cattle traceability
- Supported two new research and innovation projects, which will provide important data to contribute to the biosecurity and health of WA's cattle herd
- Developed a cross-IFS communications strategy in partnership with the Sheep and Goat and the Grains, Seeds and Hay IFS Management Committees



Image 2 – Dairy cattle

2. Industry Management Committee

For the majority of the 2021/22 financial year, the Cattle IFS was overseen by a five-member Industry Management Committee. The Committee terms of reference can be found at Appendix 1.

Steve Meerwald (Chair) is an experienced agribusiness professional with over 40 years involvement in the livestock sector in Australia and internationally. Steve's career in the livestock export and production sectors has provided him with a comprehensive understanding of the commercial and animal welfare benefits of sound biosecurity and associated risk management.

Ms Renata Paliskis (Deputy Chair to August 2021) is the owner/manager of Cows and Calves as a beef cattle producer and opportunity feedlotter. Renata is a past Chief Executive Officer of the Western Australian Meat Industry Authority.

Debbie Dowden (Deputy Chair from November 2021) has worked in partnership with her husband on Challa Station near Mt Magnet since 1995. Debbie has been actively involved in the biosecurity issues of the region for more than 10 years; and is currently the secretary of the Rangelands Fibre and Produce Association and a participant in the Australian Rural Leadership Program.



Image 3 – Droughtmaster cattle

Lyn Craig is a partner in her family-owned property near Halls Creek and has been a pastoralist for more than 30 years. Lyn is the current Chair of the Kimberley division of the Pastoralists and Graziers Association of WA, Vice Chair of the Kimberley Rangelands Biosecurity Association, and a board member of Regional Development Australia Kimberley.

John Giumelli runs a beef herd at Dardanup, following 40 years in the dairy industry. John has always been heavily involved in the politics of the dairy industry and ran a very successful Dairy Traineeship for TAFE over an eight-year period.

Locky McTaggart is a cattle farmer at Beermullah. He has 40 years' experience managing a pastoral lease in the Gascoyne region, including 25 years in a pastoral cattle operation. Locky is currently the Pastoral Committee Chair for the Pastoralists and Graziers Association of WA.

Chris Wyhoon is a livestock and hay producer from Bakers Hill. Chris has over 30 years' experience in agriculture management, cattle breeding and developing innovative cattle enterprises throughout Australia. Chris is also a master facilitator, delivering capacity-building seminars and courses in Board governance, organisational strategy, leadership and business planning.

Membership terms

Name	Position	Expiry of term
Steve Meerwald	Chair	30 June 2022
Renata Paliskis*	Deputy Chair	30 June 2022
Lyn Craig	Member	30 June 2023
Debbie Dowden	Member	30 June 2024
John Giumelli*	Member	30 June 2022
Locky McTaggart	Member	30 June 2022
Chris Wyhoon	Member	30 June 2024

* Renata and John resigned from the Committee in August 2021.

The membership of the Committee from 1 July 2022 is at Appendix 2.

3. Operation of the Cattle Industry Funding Scheme

Since the introduction of the Cattle IFS in 2010, the Industry Management Committee (the Committee) has governed the collection, management and use of industry funds to deliver a biosecurity funding scheme that benefits the WA cattle industry. During the 2021/22 financial year, the Committee held four ordinary meetings, two extraordinary meetings, and worked on various activities.

Industry priorities for funding

The Cattle IFS targeted three priority diseases during 2021/22 – Johne’s disease (cattle strain) in cattle, enzootic bovine leucosis (EBL) and bovine tuberculosis.

WA’s approach to the cattle strain of Johne’s disease (JD) has been a topic of discussion within the industry for several years. Following the advice of industry stakeholders in early 2020, the Committee worked closely with DPIRD to identify the WA cattle industry’s views on how JD (cattle strain [c-strain]) should be addressed. This was in response to the results of an IFS-funded targeted surveillance program for JD (c-strain) that found no evidence of the bacteria in the WA cattle population¹.

In late 2020, having considered the feedback from industry, the Committee recommended to DPIRD that enhanced import conditions for JD (c-strain) in cattle are implemented to minimise the risk of the disease entering the WA cattle herd. With this in place, an ongoing formal surveillance program would be funded by the Cattle IFS from 1 July 2021.

In August 2021, the Committee was notified of the detection of JD (c-strain) in a cattle herd located in WA’s south-west. In early September, the Committee were briefed on the results of tracing and modelling. Given the situation, with large numbers of potentially infected animals moving off the property into other WA herds, an eradication program would have been logistically challenging. It would have also been costly to both the Cattle IFS (at least \$10 million) and affected producers (more than 300 properties would have been required to go into immediate quarantine until their disease status was resolved).

DPIRD worked with the WA cattle industry, and a decision was made to deregulate the disease, meaning that DPIRD would no longer test imported cattle for the disease. The onus is now on cattle producers to ensure they are purchasing/introducing healthy animals to their herd.

Ensuring WA producers understand the disease status of their herds continues to be important, as this will help minimise the spread of the disease within the state. To assist, the Cattle IFS continued to fund a passive surveillance program for JD (c-strain) during 2021/22. This included funding for staff and laboratory testing to resolve suspect JD infections (see Section 5 of this report for more details about the 2021/22 JD (c-strain) surveillance program).

¹ 98% level of confidence that JD (c strain) was not present in the WA cattle population at a prevalence of 0.2% of herds and 2% of cattle within infected herds

The Australian dairy herd is recognised internationally as being free of EBL. To maintain this 'EBL free' status, milk is monitored for the presence of the virus. This requires bulk milk testing of one-third of all dairies each year, funded by Dairy Australia. In May 2021, the Committee formally approved funding for additional EBL monitoring to be undertaken during 2021/22. The IFS-funded EBL surveillance program augmented the work funded through Dairy Australia to improve the chance of early detection of EBL in WA and, therefore, eradication of the disease if it is found.

Bovine tuberculosis also remained a priority disease for the WA cattle industry, with the Committee approving the 2021/22 bovine tuberculosis surveillance program at its meeting in May 2021. Like with EBL, Australia is classified as being free from bovine tuberculosis. The IFS-funded surveillance program supports this disease-free status, enabling access to international markets.

Detailed information on the 2021/22 EBL and bovine tuberculosis surveillance programs is at Section 5 of this report.



Image 4 – Cattle grazing green pasture

The Committee were briefed on the increased risks of foot and mouth disease (FMD) and lumpy skin disease (LSD), following incursions of the diseases into Indonesia in early 2022. The Committee discussed how the IFS may be used to support the WA cattle industry, as the industry impacts would be profound if either disease were to enter Australia's cattle herd.

To ensure the Committee is kept abreast of the situation and understands the WA cattle industry's position on whether/how the IFS might be activated for these diseases, the Committee was represented on the newly created Industry and Government Preparedness (FMD and LSD) Task Group.

Wild dogs were another threat to the WA cattle industry that was raised with the Committee to consider for potential industry investment via the IFS. The Committee were briefed on the impact of wild dogs on the industry and the areas of research currently underway. After much discussion, the Committee resolved to consult IFS contributors in the next financial year on the priority pests/diseases to be addressed by the IFS, including wild dogs.

The Committee rely on industry direction and advice from DPIRD to ensure the IFS is addressing the key pest and disease risks

In 2021/22, the Committee was also represented on the Cattle, Sheep and Goat Biosecurity Consultative Group. The group was established to provide a forum to provide advice on, discuss and communicate biosecurity issues for the WA cattle, sheep and goat industries. Importantly, the Consultative Group can support the Industry Management Committee's determinations on industry pest and disease priorities for investment.

In addition to the disease priorities targeted through the IFS, during 2021/22 the IFS (using ex-CICF funds) delivered the NLIS cattle helpdesk. WA's excellent compliance performance demonstrates the value of the service, which helps WA cattle producers comply with the NLIS regulations.

In May 2021, the Committee approved two-years funding toward this service, noting the importance of accurate animal traceability in the event of a biosecurity incursion. Detailed information on the NLIS helpdesk project is at Section 6 of this report.

2021/22 also saw the Committee agree to fund two research and development projects. A formal call for projects was undertaken, with 13 applications received. These were shortlisted by an expert panel, who also assessed the detailed proposals submitted by the shortlisted candidates. The successful projects, listed below, will commence in the next reporting period:

- Determining the impact of grazing oestrogenic clovers on cattle fertility (Bovitech Veterinary Services)
- Assessing the biosecurity risk of ticks and their pathogens to the cattle industry in Western Australia (Murdoch University).

Governance

Scheme governance

Program monitoring, evaluation and continuous improvement: Over the course of the year, the Committee actively monitored the implementation and progress of the IFS-funded programs and projects. Written and verbal progress reports were provided to the Committee at each ordinary meeting, including detailed information on the issues, successes and expenditure. Detailed information on the 2021/22 programs and projects is at Sections 5, 6 and 7 of this report.

IFS finances: The Committee monitored the financial position of the IFS throughout the year. This included quarterly financial reports from DPIRD, as well as expense reports relating to the IFS-funded programs. This oversight helped the Committee ensure funds were being expended appropriately and enabled the Committee to forward-plan.

Remittance of IFS contributions: The Committee monitored the remittance of IFS contributions from livestock agents and processors to ensure compliance with the regulations. Where discrepancies occurred, or were suspected, the Committee requested these be followed-up by DPIRD. The ability to monitor the remittance of IFS contributions that are payable on cattle sold to persons other than processors or via stock agents requires consideration. This issue is also of concern to the Sheep and Goat IFS Management Committee and has been raised with DPIRD through the statutory review of the IFS regulations.

Opt out refunds: No applications for refunds of IFS contributions paid during the previous financial year were received by the due date of 31 July 2021.

IFS area of operation and contribution rate: As required by the IFS regulations, in May 2022 the Committee made its recommendations to the Minister for Agriculture and Food on the 2022/23 Cattle IFS contribution rate and area of operation. The Committee recommended that the contribution rate remain at 20 cents per head/carcass – to be applied to the sale of all cattle produced in WA. This recommendation was made by the Committee so sufficient funds can be raised to cover the costs of the 2022/23 IFS-funded programs.

The Minister endorsed the Committee's recommendations, as published in the *Western Australian Government Gazette*.

The primary role of the IFS Management Committee is to provide effective governance over the Scheme

Review of the IFS regulations: The IFS regulation review report, which was released in September 2021, made several recommendations. These included recommending that the Committee:

- Investigate developing and implementing a collaborative communications campaign with the other IFS committees; and
- Review its internal procedures for approving payments from the IFS Account to determine if there is scope for a simplified approvals process for small expenditure amounts.

The Committee agreed with these recommendations, and the other recommendations made in the report. Significant progress was made during the year to address the recommendations requiring action from the Committee.

Attracting Committee members: The ability of the Committee to provide effective governance and fairly and impartially represent the best interests of cattle producers relies on the appointment of suitably qualified and diverse candidates. It can be challenging to attract candidates to industry roles, as these positions are in addition to on-farm and family commitments. To assist, the Chair (with the Chairs of the other IFS Committees) requested the Minister ask the Public Sector Commissioner to review the remuneration of Committee members. It is important that the level of remuneration is commensurate with the work that is undertaken and recognises the commitment made by the members.

IFS Management Committee members are, in general, farmers and pastoralists with a strong interest in and commitment to the continued biosecurity of their industry



Image 5 – Droughtmaster cattle on a pastoral station

Committee governance

Strategic plan: The Committee was guided by its [Strategic Plan](#). The Plan documents the purpose, role, goals and strategies of the Committee, as well as criteria for making investment decisions.

A comprehensive review of the Strategic Plan began in June 2022, with the Committee participating in a facilitated workshop. The new Strategic Plan has been finalised and endorsed by the Committee. Further work will be undertaken with the industry to review and reset the criteria used to support IFS investment decisions.

The strategic plan review ensures a strategy to position the Committee with confidence and focus for the next three years

Governance procedures: Good governance is an essential part of the operation of the Committee. The governance framework that shaped this during 2021/22 included various critical documents, processes and procedures:

- BAM Act
- *Biosecurity and Agriculture Management (Consequential Provisions) Act 2007*
- Biosecurity and Agriculture Management Industry Funding Scheme (Cattle) Regulations 2010
- Committee terms of reference
- codes of conduct and ethics
- duty statements
- disclosure of interest procedures
- decision-making processes
- annual reporting; and
- monitoring and evaluation.

The Committee's internal governance procedures and frameworks were reviewed in March 2021. The next review will be March 2023.

Performance review: The annual self-evaluation of the Committee's collective performance of its duties was undertaken in October/November 2021. The results suggest that the Committee is operating effectively; however, there were two areas to improve:

- The Minister's engagement with the IFS and Committee. Improved communications with the Minister were felt to be important to support Committee succession through the appointment process. Regular communications with the Minister are being undertaken.
- Committee awareness and understanding of biosecurity threats to the WA cattle industry. To enable the Committee to be confident in its decisions and the direction of the IFS, keeping Committee members abreast of current and emerging biosecurity risks was felt to be important. To assist, the Committee is represented on key biosecurity consultative groups and is briefed on important issues at its quarterly meetings.

Communications and consultation

Cross-IFS communications strategy: Following the decision made by the three IFS Committees at the joint meeting held in March 2021, and in response to the recommendation from the review of the IFS regulations, the Committee agreed to develop a cross-IFS communications strategy with the other IFS committees.

The Cattle IFS Management Committee was represented on a cross-IFS communications working group to work with a communications consultant to develop a robust strategy. The objectives of the strategy, when implemented, are to improve understanding of the role that the IFSs play, increase producer engagement with the IFS and Committee, and contribute to the sustainability of the Committees.

A significant increase in IFS-related communications is anticipated in the next reporting period, as the strategy gets put into action.



Industry Funding Schemes

help agricultural
industries address
pests and diseases



Image 6 – Banner used to promote the three IFSs at field days and other events

Communication activities: The Committee participated in various forums and activities to increase producer awareness and understanding of the Scheme, develop networks and encourage industry feedback. Some forums were cancelled due to COVID-19 restrictions/uncertainties. Nevertheless, several communications activities were undertaken:

- Presentations at various producer/industry meetings
- Participated on the Cattle, Sheep and Goat Industry Biosecurity Consultative Group
- Participated on the Government and Industry Preparedness (FMD and LSD) Task Group
- Information displayed at the Dowerin and Newdegate Machinery Field Days
- Media releases resulting in articles in the rural press
- Advertisements in rural newspapers.

IFS webpages: The Cattle IFS provided up-to-date information through its webpages on the DPIRD Agriculture and Food website. The [IFS webpages](#) include links to key documents such as the Committee's strategic plan and the Cattle IFS annual reports.

Other

Review of the BAM Act: In June 2022, the Committee was invited to make a submission to the BAM Act review. As the IFSs are enabled by the BAM Act, it was appropriate for the Committee to make a submission. This was done in partnership with the other IFS Committees. The joint IFS Committee submission focused on the aspects of the BAM Act relevant to the operation and functioning of the IFSs. The submission was based on the Committee's experiences working within the bounds of the legislation and feedback it had received from industry. The key points raised by the Committees in the submission were:

- the value of the IFS provisions and benefits delivered
- improvements to the appointment of members
- tensions between program delivery and State Government recruitment policies; and
- confusion between IFSs and declared pest rates.



Image 7 – Beef cattle on Pardoo Station

4. Effectiveness of the Scheme

Opt outs and refunds

The number of producers opting out of the Scheme remains extremely low, with only two producers opting out in 2021/22 (Figure 1). Neither of these producers applied for a refund of their contributions.

More than 99% of WA cattle producers participate in the Scheme, which indicates the perceived value of the Scheme to the industry.

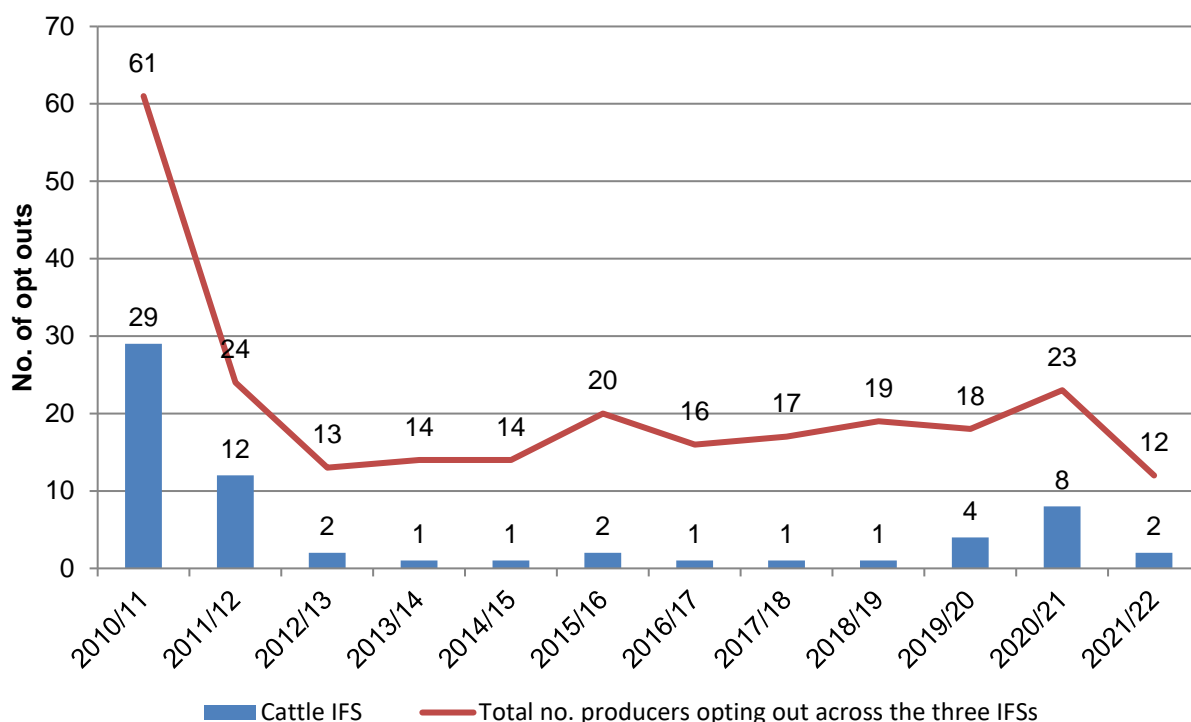


Figure 1 – Number of producers opting out of the Industry Funding Schemes since 2010

Collection rates

A total of \$100,881 in contributions to the Cattle Industry Funding Scheme was received during 2021/22. This represents 504,405 chargeable sales for which IFS contributions were paid.

At the time of writing, data were not available to enable a comparison to be made between the number of chargeable sales for which IFS contributions were paid and the estimated number of chargeable sales that occurred during the year. However, the 2021/22 income is markedly less than the previous financial year when IFS contributions were collected on 731,990 chargeable sales.

5. 2021/2022 approved biosecurity programs

Surveillance for enzootic bovine leucosis

Enzootic bovine leucosis (EBL) is a viral disease of cattle that infects white blood cells and causes a leukaemia. The Australian dairy herd is recognised internationally as being free of EBL. To maintain this 'EBL free' status, milk monitoring is undertaken. This requires bulk milk testing of one-third of all dairies each year, which is funded by Dairy Australia.

The objective is to protect and enhance Australia's access to the international export trade in milk, dairy products and live exports, as well as enhance confidence for domestic consumption of dairy products

The WA dairy industry decided to undertake a higher level of monitoring than the national requirements. This means WA is well-placed for early detection of EBL in the dairy herd and, therefore, enhances the chances of eradicating the virus if it is found. In WA, a bulk milk test is conducted annually for all dairies; and an intensive bulk milk test is conducted each year on one-third of dairies milking more than 500 cows (meaning all dairies milking more than 500 cows are tested in this way over a three-year period). The expense of conducting these additional tests is funded by the WA cattle industry through the Cattle IFS.

In the 2021/22 financial year, bulk milk testing was carried out on 122 of 128 dairies; and repeat sampling and testing was conducted on four large dairies. Restrictions put in place due to COVID-19 meant that not all dairies were able to be sampled.

All the 2021/22 samples were negative for the virus.



Image 8 -Milking cows in a rotary dairy

Surveillance for bovine tuberculosis

Bovine tuberculosis is an infectious bacterial disease of cattle, affecting the lungs or digestive tract. It can be transmitted to humans from infected animals and from unpasteurised dairy products. Australia is classified as being free from bovine tuberculosis.

In 2021/22, the IFS was available to fund investigations of cattle that reacted to the tuberculin test, which is a pre-export requirement for animals being exported to certain countries. During the year, there were no tuberculosis reactors in pre-export testing. Funding to conduct investigations on carcasses with tuberculosis-like defects, as identified by meat inspectors, was also provided as part of the surveillance program.

During 2021/22, there was four diagnostic cases (i.e. symptomatic animals). However, follow-up testing revealed that all samples were negative for bovine tuberculosis.



Image 9 – Limousin cattle on green pasture

Surveillance for Johne's disease in cattle

The cattle strain of Johne's disease (JD) is a chronic wasting disease caused by the bacterium *Mycobacterium avium* subspecies *paratuberculosis*. The disease has a long incubation period and is spread by infected animals. JD reduces production levels in cattle even before symptoms are apparent. There is currently no treatment.

The Cattle IFS funded a surveillance program that investigated cattle showing symptoms of JD. The program also re-tested cattle that reacted to the pre-export JD blood test.

In 2021/22, diagnostic investigations were carried out on animals from 21 property identification codes (PICs) that were showing clinically similar signs of JD infection. All investigations were negative for Johne's disease.

During routine pre-export testing to meet health certification requirements, 243 animals returned positive results to the JD enzyme-linked immunosorbent assay (ELISA) blood test. These were followed-up with confirmatory testing, and all the animals were resolved as negative using the more accurate high throughput Johne's polymerase chain reaction (HT-J PCR) test for JD in cattle.

2021/22 disease surveillance expenditure

The costs of the 2021/22 surveillance programs for EBL, bovine tuberculosis and JD in cattle are presented in Table 1.

Table 1 – Costs of the 2021/22 disease surveillance programs for EBL, bovine tuberculosis and JD in cattle

Expenses	\$
Employee expenses	15,704
Laboratory costs	32,311
Travel	6,189
Sale of goods	0
Total cost of program	\$54,204

IFS contributions funded surveillance for enzootic bovine leucosis, bovine tuberculosis and Johne's disease in cattle at a total cost of \$54,204

6. 2021/22 programs funded via ex-CICF

With the repeal of the *Cattle Industry Compensation Act 1965* (CICA) and the commencement of the IFS regulations under the BAM Act, funds from the Cattle Industry Compensation Fund (CICF), a fund established under the CICA, were transferred to the Cattle IFS Account. These 'ex-CICF' funds are now managed by the Cattle IFS Management Committee and can be used for activities that will benefit the WA cattle industry.

WA-based NLIS cattle helpdesk

The NLIS provides lifetime traceability of cattle in the event of a disease outbreak or residue contamination. It also gives markets confidence in Australia's product integrity. All sectors of industry are required to comply with the NLIS regulations. A national NLIS helpdesk, administered from Sydney, provides advice on issues relating to the use of the NLIS database.

The WA-based NLIS cattle helpdesk provides advice and support to help WA cattle producers comply with the NLIS regulations

In conjunction with the WA-based Cattle Industry Biosecurity and Food Safety Association (CIBFSA), the Cattle IFS has been co-funding the operations of the WA NLIS cattle helpdesk since mid-2015. Two-thirds of the costs of this project are funded through the IFS using ex-CICF funds, and one third of the costs are provided by the CIBFSA. Between 2011 and 2015, the WA-based NLIS helpdesk was fully funded through the IFS (ex-CICF). State Government funding covers basic auditing and monitoring activities.

During the year, the helpdesk responded to more than 15,000 telephone and email enquiries (excluding text messages) (Table 2). In addition, 26 onsite visits were undertaken. These including training activities, field days and conferences.

The helpdesk focused on educational and preventative measures to improve compliance with NLIS identification, movement and database recording. This builds the capacity of NLIS users, reduces instances of non-compliance, and lessens the reliance on helpdesk staff. The helpdesk has been instrumental in building compliance levels, meaning WA will be well-placed in the event of a disease outbreak or residue contamination.

The total cost of this service in 2021/22 was \$134,062, of which \$44,687 was funded by the CIBFSA (Table 3).

Table 2 – Helpdesk enquiries from July 2021 to June 2022

Regions	Telephone	Email	Total
Pastoral area	424	1455	1879
Agricultural area	2865	4154	7019
Other*	1040	5611	6651
Total	4329	11,220	15,549

*e.g. abattoirs, agents, saleyards etc.

Table 3 – Costs of the 2021/22 NLIS cattle helpdesk

Item	\$
Employee expenses	123,650
Vehicle	4,866
Travel	4,089
Communications	1,457
Total cost	134,062
CIBFSA contribution	-44,687
Total cost to the Cattle IFS (ex-CICF)	\$89,375



Image 10 – WA NLIS helpdesk

Biosecurity and traceability communications

The Biosecurity and Traceability Communications project was a fixed-term project, running from 1 July 2020 to 31 December 2021. The project delivered extension and communication activities to augment the work already undertaken through the NLIS helpdesk. The purpose was to enhance compliance with NLIS reporting and recording for WA cattle.

The project undertook a range of activities:

- Conducted a baseline survey of 908 randomly selected cattle owners. The survey was to get a clearer picture of the level of understanding WA cattle producers have regarding cattle traceability requirements. It is envisaged that the survey will be repeated in the future to see whether improvements have been made
- Engaged a consultant to review the communications messaging associated with cattle traceability and biosecurity. This work included input from the cattle industry via a stakeholder workshop
- Developed 'Operation Stocktake', which identified various communication activities to raise awareness of the need for cattle to be registered to the PIC of consignment by encouraging producers to conduct stocktakes
- Developed several infographics, messaging and QR codes to use in communications
- Produced an array of materials to promote traceability and biosecurity including signage, magnets, National Vendor Declaration waybill book covers, posters, hi-vis vests for saleyard staff and transporters, factsheets, webpages and a banner to use at field days
- Developed various communications activities, including radio, print and online advertisements, newsletter articles, social media posts, videos, blog articles and webinars. Information was also promoted via conferences, meetings and field days.

The costs of the project are shown in Table 4. Of this amount, only \$4851 was expended in 2021/22.

Table 4 – Biosecurity and Traceability Communications project costs

Item	\$
Advertising and promotion	21,869
Consultant	11,540
Other	1,350
Venue hire	906
Communications	467
Staff travel	142
Total cost of program	\$36,274

7. Research and development

Early detection of Johne's disease

Johne's disease is a chronic wasting disease caused by infection with the bacteria *Mycobacterium avium* subspecies *paratuberculosis* (MAP). The disease is difficult to detect because an infected animal is unlikely to show symptoms or shed the bacteria in the faeces until 2-6 years after being infected. Furthermore, shedding the bacteria in the faeces is intermittent. By the time clinical symptoms occur, the animal will have been carrying the bacteria for at least two years (and possibly up to six years) and will have shed bacteria, thereby contaminating the pastures. Ingestion is the primary route of infection.

Detecting the disease before the animal sheds and contaminates the environment has the potential to enable better management and/or eradication of the disease

DPIRD developed a next generation DNA sequencing (NGS) technique that was able to detect MAP bacteria in ovine blood samples. The Cattle IFS provided funding to further develop and test the NGS technique to determine if MAP bacteria can be reliably detected in the blood or white cells of JD-infected animals. The aims of the project are to:

1. Optimise the NGS technique to increase the sensitivity of detecting the MAP bacterium in seeded and naturally infected blood
2. Apply the optimised NGS technique to test sheep infected with JD (sheep strain) at regular intervals to determine if circulating MAP bacterium is always present (and detectable) and compare this with faecal samples
3. Conduct a parallel study on ewes and lambs to determine the age at which an infected animal is detected as being JD positive.

Aim #1 was completed in 2018/19. This included determining the optimal volume of blood to use in the analysis as well as identifying the best reaction kits and test conditions to use.

During 2020/21, samples of blood and faeces were collected from 311 merino ewes that had potentially been exposed to JD. All animals were tested for JD using current diagnostic tests (i.e. JD ELISA on serum and HT-J PCR on faeces) as well as HT-J PCR on blood and NGS. A total of 1244 tests were undertaken.

Results from 795 tests using the NGS technique were analysed through the bioinformatics program *Geneious* (Table 5). The data were further analysed during 2021/22 using alternative bioinformatics programs to compare the accuracy, time taken to do the analysis and the ease of use of different programs.

There were no costs paid from the IFS Account during 2021/22 for this research.

Table 5 – Results to date for detection of JD in samples from 311 merino ewes (analysed using *Geneious*)

JD ELISA (serum)	HT-J PCR (faeces)	HT-J (blood)	NGS technique
22 (7.1%) positive	22 (7.1%) positive or indeterminate	21 (6.8%) positive or indeterminate	83 (26.7%) positive 26 (8.4%) indeterminate

Notes:

- Indeterminate: cannot determine a definite positive or a definite negative result
- Positive: positive result for JD
- A false positive may be due to artifact, primer dimer or cross-reaction from other similar DNA
- A false negative may be due to an inhibited reaction or the amount of MAP DNA being less than can be detected by the test



Image 11 – Work being undertaken at the DPIRD diagnostic laboratories

Cattle IFS research and development grants

In 2019/20, the Committee agreed to reinstate the Cattle IFS Research and Development Funding program. The purpose of this program is to provide funding of up to \$50,000 per year to support biosecurity-related research and innovation projects that will benefit the WA cattle industry. The premise continues the funding that was provided under pre-IFS arrangements, which used the interest revenue accrued on the ex-CICF funds for activities that will benefit the industry.

A call for expressions of interest commenced in June 2021, seeking preliminary proposals for projects that will:

- improve cattle health
- increase productivity
- increase profitability
- help develop sustainable industry practice
- promote market success; and/or
- enhance industry capability.

Thirteen expressions of interest were received. These were assessed by a Panel of industry professionals and technical experts, who shortlisted four projects. Full proposals were requested from the proponents of the shortlisted projects. These were assessed, and recommendations made to the Committee on projects to fund.

The Committee approved funding for two projects, which will commence in the next reporting period:

- *Determining the impact of grazing oestrogenic clovers on cattle fertility* (Bovitech Veterinary Services, \$150,000 over three years).

‘Clover disease’, a syndrome that negatively impacts reproduction and health, is well documented in sheep but under-researched in cattle. There is evidence that cattle are vulnerable to reduced fertility if exposed to phytoestrogens, including anecdotal evidence from WA, but there is no data to determine critical thresholds above which these effects may manifest in cattle grazing oestrogenic pastures in Australia.

This research will investigate the effect of phytoestrogens on cattle fertility and, if an association is determined, evaluate diagnostic and risk assessment tools to identify vulnerable herds and provide guidelines for industry.

- *Assessing the biosecurity risk of ticks and their pathogens to the cattle industry in Western Australia* (Murdoch University, \$148,364 over three years)

Tick-borne diseases can have significant impacts on the cattle industry, and climate change can potentially influence the spread of tick species and the pathogens they transmit.

This project will identify the WA cattle industry’s understanding and practices relating to the biosecurity implications of ticks and tick-borne disease. It will also establish a baseline for the presence, distribution and population structure of ticks on and adjacent to cattle farms, and screen for bacterial and blood-borne parasites.

8. 2021/2022 financial details

The Director General of DPIRD administers the IFS finances through an agency special purpose account called the Cattle Industry Declared Pest Control and Compensation Account (the IFS Account). DPIRD manages these funds on behalf of the Committee and prepares financial reports, including the end of financial year statement.

- The balance of the IFS Account was \$5,620,397 at 30 June 2022 This included \$4,991,505 of ex-CICF funds and \$628,892 of IFS funds.
- The total cost of the disease surveillance programs in 2021/22 was \$54,204².
- The 2021/22 NLIS cattle helpdesk project cost \$134 062, with one-third of these costs provided by the CIBFSA².
- \$4851 was spent on the Biosecurity and Traceability Communications project.
- There was no expenditure on the research into the NGS technique.
- Industry contributions to the IFS totalling \$100,881 were received by DPIRD; and no producers who opted out of the Scheme in 2020/21 applied for a refund of the contributions paid.
- Interest applied to the IFS funds amounted to \$3389; and \$22,929 of interest was applied to the ex-CICF.
- The Committee costs amounted to \$10,148.

Tables 6 and 7 contain the financial details for the 2021/22 Cattle IFS. Figure 2 identifies how the funds held in the IFS Account were used during the year.

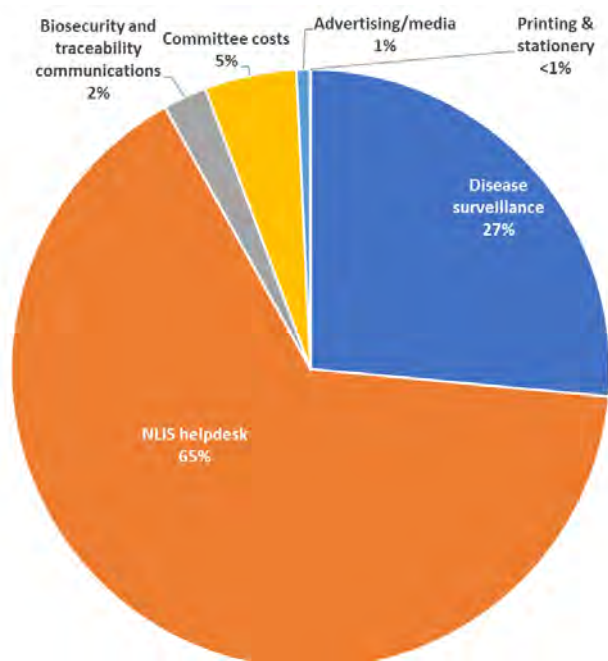


Figure 2 – Use of funds held in the Cattle IFS Account during 2021/22

² Some of the costs of the 2021/22 programs were deducted from the Account during the 2022/23 financial year

Table 6 – Cattle IFS income and expenditure for 2021/22

Expenses	IFS (\$)	Ex-CICF (\$)	Total (\$)
Programs:			
Disease surveillance	54,204	-	54,204
NLIS helpdesk	-	134,062	134,062
NGS research	-	-	-
Biosecurity and traceability communications	-	4,851	4,851
Other expenses:			
Board fees	6,777	-	6,777
Travel expenses	2,569	-	2,569
Advertising/media	1,491	-	1,491
Meeting expenses	775	-	775
Printing & stationery	63	-	63
Communications	27	-	27
2020/21 opt out refunds	-	-	-
Total expenses	65,906	138,913	204,819
Income			
Contributions	100,881	-	100,881
CIBFSA	-	44,687	44,687
Interest revenue	3,389	22,929	26,318
Total income	104,270	67,616	171,886
NET COST OF SERVICE	-38,364	71,297	32,933

Table 7 – Balance sheet for the Cattle IFS

Balance sheet	IFS (\$)	Ex-CICF (\$)	Total (\$)
EQUITY at 30 June 2022	628,892	4,991,505	5,620,397

Note: the amounts shown in Table 6 for the disease surveillance program and the NLIS helpdesk are the total costs of the 2021/22 programs. Some of these costs were debited from the Account during the 2022/23 financial year. As the NGS research and Biosecurity and Traceability Communications project are not annual programs, the amount shown in Table 6 is the actual expenditure from the Account for these items. The balance sheet (Table 7) identifies the actual equity at 30 June 2022.

9. Direction for 2022/2023

The strategic direction of the Cattle IFS will be an important focus for the Committee during 2022/23. With the Committee's updated strategic plan now in place (Figure 3), it will continue to work on an action plan that will support the delivery of the strategy. The Committee have committed to engaging with the scheme contributors to review and redefine the criteria used to help make decisions on how IFS funds are used.

Concurrently, the cross-IFS communications strategy will be put into action. It is anticipated that the level of IFS communications to producers will improve significantly to support greater awareness, understanding and engagement with the IFS and the Committee. This is an important aspect of the work of the Committee – without the support of producers, the scheme would not be able to operate to support the industry's biosecurity.

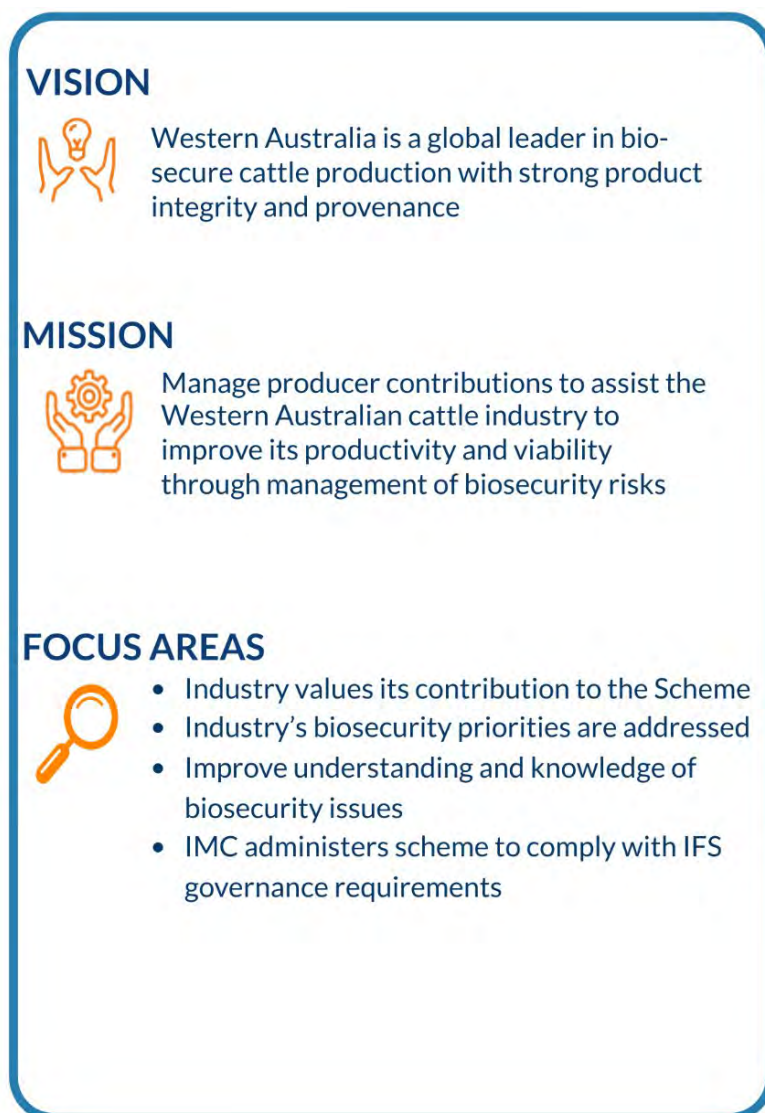


Figure 3 – Summary of the Cattle IFS Management Committee Strategy (2022-2025)

In partnership with DPIRD, the Committee will continue to monitor and manage the disease surveillance programs, the NLIS cattle helpdesk, and the NGS research. It will also actively engage with DPIRD to keep up to date with the FMD and LSD situation. Through its industry engagement, the Committee will seek to understand how the industry might want to use the IFS if either of these diseases were to enter Australia. This will ensure the Committee is prepared if quick decisions are required.

The biennial meeting of the three IFS Committees is anticipated to be held during 2023. The joint meeting will provide a forum for the Committee to:

- share successes and insights
- discuss emerging IFS issues; and
- agree on future focus areas to be tackled collaboratively across the Committees.

The Committee will also action the recommendations from the review of the IFS regulations that are relevant to the Committee, and monitor how DPIRD addresses the recommendations relevant to it. Addressing these recommendations will be important to help ensure the Scheme is operating as effectively as it can be and that the IFS regulations remain relevant and appropriate in an ever-changing operating environment.

If regulatory amendments are required, the Committee will provide input to these to make certain the changes meet the needs of the WA cattle industry and IFS contributors.

The Cattle IFS is industry-driven, with industry itself deciding if, when and to what extent the Scheme is used.

Industry feedback is critical to the success of the Scheme. The Committee welcomes feedback and input to the Scheme, its programs and cattle industry issues in general

The Committee can be contacted at any time through its Executive Officer. The Committee is particularly keen to hear the industry's views on the biosecurity risks and opportunities.

Committee members are available to participate in industry forums, meetings and field days to discuss the Scheme and answer any questions from industry.

Appendix 1

Committee terms of reference

1. Act in good faith at all times, and without conflict of interest, to fairly and impartially represent the best interests of the industry concerned and the contributors to the Scheme.
2. Provide effective governance over the Scheme.
3. Discharge the functions conferred on the Management Committee by the *Biosecurity and Agriculture Management Act 2007* (BAM Act) and the enabling Regulations, including but not necessarily limited to:
 - advising the Director General of the Department of Primary Industries and Regional Development on the administration of the prescribed account
 - recommending annually to the Minister for Agriculture and Food the area(s) of the State in which the Scheme should operate
 - recommending annually to the Minister for Agriculture and Food the rate or rates at which contributions are to be paid
 - approving programs and other measures to be implemented under the Scheme
 - approving payments from the prescribed account for compensation in respect of losses (as described in the regulations)
 - consulting annually with the industry for the purpose of ascertaining industry views on the operation of the Scheme and the performance by the committee of its functions
 - reporting at least annually to the Minister for Agriculture and Food on the operation and effectiveness of the Scheme, and any matters relating to the operation of the relevant regulations as the Minister specifies.
4. Undertake such other functions related to the operation of the Scheme as required.

Appendix 2

Management Committee membership from 1 July 2022

Name	Position	Expiry of term
Debbie Dowden	Chair	30 June 2024
David Jarvie	Deputy Chair	30 June 2024
Wendy Brockhurst	Member	30 June 2025
Lyn Craig	Member	30 June 2023
Philip Hall	Member	30 June 2025
Chris Wyhoon	Member	30 June 2024