



Department of  
Primary Industries and  
Regional Development



Cattle  
Industry Funding Scheme

# Cattle Industry Funding Scheme

## Annual Report

# 2020/2021



**Contact details**

Rebecca Heath

Department of Primary Industries and Regional Development

IFS@dpiird.wa.gov.au

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## From the Chair

I am pleased to present the 2020/21 Cattle Industry Funding Scheme (IFS) annual report to the Scheme participants, all stakeholders involved in the Western Australian (WA) cattle industry and to the Minister for Agriculture and Food.

Johne's disease (cattle strain) remained a priority area for the Committee during 2020/21. In partnership with staff from the Department of Primary Industries and Regional Development (DPIRD), we coordinated a process to identify the WA cattle industry's position on future Johne's disease (cattle strain) management in WA, following the promising results from the targeted surveillance undertaken in 2019/20.

The efforts of the IFS Committee and the industry should be commended. The year highlighted the ability of the industry to work together on a complex issue that would impact differently on sectors across our industry.

Unfortunately, as we are all by now aware, Johne's disease (cattle strain) has since been detected in home-grown cattle. This sparked an immediate response from DPIRD to trace the extent of the infection. Unfortunately, the number of movements of cattle off the infected property and the nature of the disease (i.e. the likely time from infection to detection) meant that eradication efforts would be extremely onerous on a large section of industry with little likelihood of success. Following consultation, and with majority industry support, a deregulated approach to managing JD (cattle strain) is now in place. This has important implications for WA cattle producers, who should ensure they have robust biosecurity plans in place for their properties to ensure their herds remain free of this disease, and other biosecurity risks, going forward. Sound biosecurity management should be at the core of every animal production system.

On a positive note, 2020/21 saw the Committee reinstate the Cattle IFS Research and Development program. This is an important program to support much-needed research and development to enhance the cattle industry here in WA. I look forward to seeing what exciting and innovative work is on the horizon.

The Committee has also been busy attending to other matters such as reviewing the IFS regulations to ensure that they meet industry needs, and the successful delivery of a number of IFS-funded programs and projects. As a Committee, we have strived to operate in an open and transparent way and to engage with industry as best we can. Industry feedback and input is critical to the success of the IFS, and we will continue with our efforts in this space.

I thank my Committee members for their ongoing commitment to the IFS and the biosecurity of our industry, DPIRD for its executive and technical support and, importantly, all WA cattle producers for your continued support for the Cattle IFS and your robust engagement on matters concerning the biosecurity of the WA cattle industry.



Steve Meerwald  
Chair, Cattle Industry Funding Scheme Management Committee



Consultation on the future management of Johne's disease (C-strain) in cattle in Western Australia is now open

Image 1 – Image used to promote the industry consultation on the future management of Johne's disease in WA cattle

## List of acronyms

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
HT-J PCR	high throughput polymerase chain reaction
IFS	Industry Funding Scheme
JD	Johne's 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

## 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 was established by regulation under the *Biosecurity and Agriculture Management Act 2007* 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.

**The purpose of the Cattle IFS is to facilitate improvements in the biosecurity, productivity and viability of the WA cattle industry, enabling WA to maintain its global recognition for excellent cattle disease status and product integrity.**

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 to deal with the pests and diseases to which the Scheme relates, but does disqualify the producer from 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 support, 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.

## **2020/21 Cattle Industry Funding Scheme at a glance**

During 2020/21:

- Contributions of 20 cents per head/carcass applied to the sale of all cattle produced in WA
- IFS contributions totalling \$181 066 were received
- IFS funds totalling \$70 091 were used to undertake passive surveillance for Johne's disease in cattle, enzootic bovine leucosis and bovine tuberculosis
- Committee expenses were \$21 643
- Eight producers opted out of the Scheme. None of these producers applied to have their IFS contributions refunded
- \$119 176 of ex-CICF funds were used to fund the WA helpdesk for the National Livestock Identification System (NLIS). One-third of these costs were recovered by the Cattle Industry Biosecurity and Food Safety Association
- Ex-CICF funds totalling \$26 929 were used to undertake a project to enhance biosecurity and traceability-related communications
- \$7490 of IFS funds were used to undertake research to develop a method for the early detection of Johne's disease.



Image 2 – Calves

## 2. Industry Management Committee

The Cattle IFS is overseen by a seven-member Industry Management Committee. The Committee terms of reference can be found at Appendix 1.

**Mr 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 management of biosecurity and associated risk management.

**Ms Renata Paliskis (Deputy Chair)** 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.

**Ms 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.

**Mrs Debbie Dowden** 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 – Angus cattle



**Mr 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.

**Mr 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.

**Mr Mike Norton** is a third generation livestock producer, with a large-scale operation across five different commodities. Mike has a long history in leadership positions with the cattle and livestock industries, including as Chair of the WA NLIS Cattle Implementation Committee and SafefarmsWA and as a past President of the WA Farmers Federation.

### 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 2021
Debbie Dowden	Member	31 December 2021
John Giumelli	Member	30 June 2022
Locky McTaggart	Member	30 June 2021
Mike Norton	Member	30 June 2021

The membership of the Committee from 1 July 2021 is at Appendix 2.

**The Industry Management Committee administers producer contributions on a prioritised basis to assist the WA cattle industry to manage biosecurity risks and improve its productivity and viability.**

### 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 2020/21 financial year, the Committee held four ordinary meetings and one out-of-session videoconference, and worked on a number of key activities.

#### Industry priorities for funding

**Johne's disease in cattle:** The Committee approved two programs focussed on Johne's disease (JD) in cattle that were undertaken during 2020/21 – a passive surveillance program to detect the cattle strain (c-strain) of the disease in WA cattle; and research to develop a DNA-based test to detect JD in the blood of infected animals. The research project commenced in 2017/18, with funding approved to 30 June 2022. The passive surveillance program is an ongoing program that the Committee reviews each year.

Detailed information on the 2020/21 programs targeting JD in cattle can be found in Sections 5 and 7 of this report.

**Enzootic bovine leucosis:** In May 2020, the Committee agreed to continue funding a surveillance program to detect enzootic bovine leucosis (EBL) into 2020/21. The EBL surveillance program augments the surveillance 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. Detailed information on the 2020/21 surveillance program is at Section 5 of this report.

**Bovine tuberculosis:** Bovine tuberculosis remained a priority disease for the WA cattle industry, with the Committee approving funding to continue the tuberculosis surveillance program into 2020/21. Detailed information on the 2020/21 bovine tuberculosis surveillance program is at Section 5 of this report.



Image 4 – Brahman cattle

**NLIS helpdesk:** In February 2020, the Committee approved IFS funding (ex-CICF) to deliver the WA-based NLIS helpdesk in the 2020/21 financial year. The NLIS helpdesk is a valuable service that delivers phone, email and onsite advice and support to help WA cattle producers comply with the NLIS regulations. In March 2021, the Committee agreed to extend the funding for a further two years to 30 June 2023. Detailed information on the 2020/21 NLIS helpdesk project is at Section 6 of this report.

To complement the funding to deliver the NLIS helpdesk, the Committee approved funding for communications activities to help improve levels of producer compliance with the NLIS requirements. The Biosecurity and Traceability Communications project commenced on 1 July 2020. Detailed information on the project is at Section 6 of this report.

**Research and development:** In 2019/20, the Committee agreed to reinstate the Cattle IFS Research and Development Funding program. The purpose of this program is to providing funding of up to \$50 000 per project per year to support biosecurity-related research and development projects that will benefit the WA cattle industry. During 2020/21, the Committee reviewed and updated the criteria and funding guidelines. A call for projects commenced in June 2021, seeking biosecurity-related projects that will benefit the WA cattle industry by:

- improving cattle health
- increasing productivity
- increasing profitability
- helping develop sustainable industry practice
- promoting market success; and/or
- enhancing industry capability.

Interested community, industry and producer groups; research, not-for-profit, government and other organisations; education institutions; and individuals were encouraged to apply.

**Other industry priorities:** The Committee was represented on the Cattle, Sheep and Goat Biosecurity Consultative Group. The group was established to provide a forum to advise of, discuss and communicate biosecurity issues that are of importance to the WA cattle, sheep and goat industries. Importantly, the Consultative Group provides a forum to support the Industry Management Committee's determinations on industry priorities for investment.

**Since 2010, the Industry Management Committee has governed the collection, management and use of industry funds to deliver a biosecurity funding scheme that benefits the WA cattle industry.**

## Governance

**Strategic plan:** The Committee was guided by its [Strategic Plan](#). The Plan documents the purpose, role, goal and strategies of the Committee, as well as criteria for making investment decisions. The plan will be reviewed during the next reporting period.

**Program monitoring, evaluation and continuous improvement:** Over the course of the year, the Committee actively monitored the progress of the IFS-funded programs. Written and verbal progress reports were provided to the Committee at each ordinary meeting, including detailed information on the issues, successes and expenditure. The Program Managers actively considered ways in which delivery could be improved, with several changes made to improve efficiencies and effectiveness – for example, utilising alternative diagnostic tests to detect disease.

**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.



Image 5 – Cattle grazing on pastures

**Governance procedures:** Good governance is an essential part of the operation of the Committee. To this end, Committee members registered potential conflicts of interest, which were reviewed at the beginning of each meeting. In addition, formal processes were used for decision-making, and the Committee continued to abide by its Code of Conduct and the Public Sector Code of Ethics.

**IFS regulation amendments:** During the year, the Committee provided a submission on proposed changes to the Biosecurity and Agriculture Management Industry Funding Scheme (Cattle) Regulations 2010. The Committee agreed with all the proposed amendments, which resulted in changes to the regulations to:

- consolidate the Cattle IFS Appointments Committee into a single committee that covers all three IFSs
- consolidate the Cattle IFS Review Panel into a single panel that covers all three IFSs
- ensure Committee members and the Review Panel aren't eligible for membership if they opt out of the scheme; and
- ensure alignment between the regulations and the *Biosecurity and Agriculture Management Act 2007*.

**Review of the IFS regulations:** A review of the IFS regulations was undertaken by DPIRD in 2021. The Committee provided a formal submission in response to a discussion paper released by DPIRD. The submission identified the Committee's position on a number of key areas:

- the ability for a person that opts out of the scheme to opt back in without penalty, if a new pest/disease is targeted.
- the opt out timeframe
- the use of IFS funds for general, non-pest-specific biosecurity-related activities
- the compensation provisions.

The Committee also raised concerns with the approval process for expenditure from the IFS Account, the cost-effectiveness of processing applications for refunds of IFS contributions and the ability to monitor compliance, in terms of the payment of IFS contributions in relation to private sales.

**Joint IFS Committee meeting:** In March 2021, the three IFS Management Committees held a joint meeting to:

- Share successes and insights between Management Committees
- Discuss emerging IFS issues
- Agree on future focus areas to be tackled collaboratively across the Management Committees

The joint meeting was a valuable opportunity for the Cattle IFS Management Committee to discuss its operations with the other committees, identify shared issues and work on collaborative action across the Schemes.

## Compliance with the Industry Funding Scheme regulations

**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. As noted previously, 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 was raised as an issue with DPIRD via the formal review of the IFS regulations.

**Opt out refunds:** In November 2020, DPIRD advised the Committee that one application for a refund of the IFS contributions paid during the 2019/20 financial year was received. After considering the application, the Committee directed the Director General to repay the amount – in accordance with the requirements of the IFS regulations.

**IFS area of operation and contribution rate:** As required by the IFS regulations, in April 2021 the Committee made its recommendations to the Minister for Agriculture and Food on the 2021/22 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. The Minister endorsed the Committee’s recommendations, as published in the *Western Australian Government Gazette*.

## Industry consultation

**Management of JD (c-strain):** Following the advice of key industry stakeholders at a meeting held in February 2020, the Committee worked closely with DPIRD to develop and implement consultation with the WA cattle industry to identify the broader industry’s views on how JD (c-strain) should be addressed. This was in response to the IFS-funded targeted surveillance program for JD (c-strain) that found no evidence of JD (c-strain) in the WA cattle population<sup>1</sup>.

The consultation was undertaken during 2020/21, with cattle producers and industry organisations invited to lodge written submissions on their preferred option for managing JD (c-strain) in cattle in WA. This was followed by a meeting of WA cattle industry representatives.

The Committee, having considered the industry submissions and the positions put forward at the industry meeting, noted:

- A significant majority of the industry supports the continuation of a state-wide regulated approach to managing JD (C-strain) in cattle
- The majority of the industry supports enhanced import conditions to achieve a level of risk mitigation for JD (C-strain) in cattle equivalent to that which was in place prior to deregulation.

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<sup>1</sup> 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.

Based on these findings, the Committee recommended to DPIRD that enhanced import conditions for JD (c-strain) in cattle are implemented, acknowledging that this was not a unanimous industry decision.

The full consultation process and report can be accessed from the [Talking Biosecurity](#) website.

**General consultation:** Passive communications (e.g. media, articles) were used to encourage industry/producer feedback on the operation of the Scheme following the release of the 2019/20 annual report.

## Communications

**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.

Communication activities undertaken during the year included:

- Presentations at various producer/industry meetings
- Participating on the Cattle, Sheep and Goat Industry Biosecurity Consultative Group
- Information display at the Wagin Woolorama
- Media releases resulting in articles in the rural press
- Radio interviews
- Social media.

**IFS webpages:** During 2020/21 the Cattle IFS provided up-to-date information through its webpages on the DPIRD website. The [IFS webpages](#) include links to key documents such as the Committee's strategic plan and the Cattle IFS annual reports.

## Other

**Biosecurity funding mechanisms:** The Committee participated in a consultation process coordinated by the Biosecurity Council of Western Australia to provide its views on the IFS as a biosecurity funding mechanism. The process focused on the strengths of the IFS and opportunities for improvement, as well as general discussion around industry funding for biosecurity.



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

## 4. Effectiveness of the Scheme

A total of \$181 066 in contributions to the Cattle Industry Funding Scheme was received during 2020/21.

The number of producers opting out of the Scheme remains extremely low, with only eight producers opting out in 2020/21 (Figure 1).

None of the eight producers that opted out in 2020/21 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.

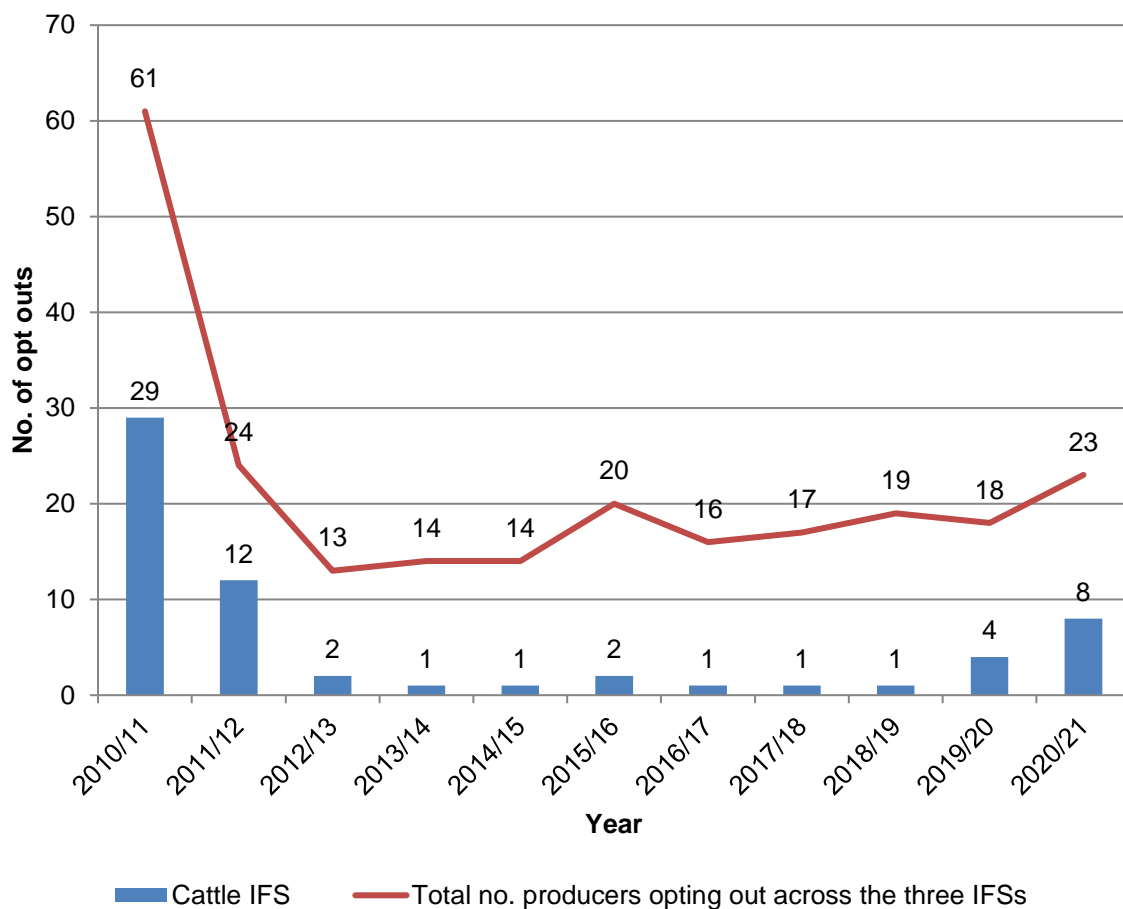


Figure 1 – Number of producers opting out of the Industry Funding Schemes since 2010

**More than 99% of Western Australian cattle producers participate in the Cattle Industry Funding Scheme, which indicates the importance of the Scheme to the industry.**



For the 2020/21 financial year, the estimated number of cattle sales on which IFS contributions were payable was 731 990. Contributions were paid on 905 330 cattle during the year (that is, 124%). This analysis of the collection rate for Cattle IFS contributions uses data from the Australian Bureau of Statistics, Department of Primary Industries and Regions South Australia, the WA Meat Industry Authority and Meat and Livestock Australia to estimate the number of ‘chargeable sales’ (as defined by the regulations) that took place during the year. It must be stressed that there are limitations to the analysis – for example, data are not available for private sales or interstate sales where cattle are moved out via roads other than the Eyre Highway.

Owing to the difficulties in accurately estimating the number of chargeable sales, the Committee regularly monitors the contributions being paid to the IFS to ensure the regular and correct remittance of contributions from agents and processors.

Owners of stock sold to persons other than through agents or to processors (for example, to exporters or to other producers) are required to pay the IFS contributions direct to the Scheme.



Image 7 – Dairy cattle

## 5. 2020/2021 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. In order 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, and 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, enhance 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 200 cows (meaning all dairies milking more than 200 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 2020/21 financial year, bulk milk testing was carried out on 102 of 127 dairies. Restrictions put in place due to COVID-19 meant that not all dairies were able to be sampled. This will be rectified in the 2021/22 year, with more efficient sampling methods being employed.

All of the 2020/21 samples were negative for the virus.

### 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 2020/21, the IFS funded investigations of cattle that reacted to the tuberculin test, which is a pre-export requirement for animals being exported to certain countries. The IFS compensated the owners of the investigated animals, and the IFS received the proceeds from the sale of these animals. 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 2020/21, three animals reacted to the tuberculin test and there was one diagnostic case (i.e. a symptomatic animal). However, follow-up testing revealed that all samples were negative for bovine tuberculosis.

### **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. The IFS compensated the owners of animals that had to be slaughtered for more comprehensive testing, and funds were recouped to the IFS from the sale of these animals.

In 2020/21, diagnostic investigations were carried out on animals from six property identification codes (PICs) that were showing signs of potential JD infection. Three PICs were positive for the bacteria (two with the sheep strain and one with cattle strain of the disease). The other three PICs returned negative results for JD.

During routine pre-export testing to meet health certification requirements, 264 animals returned positive results. These were followed-up with confirmatory testing, and all the animals were resolved as negative for JD in cattle.

Table 1 – Costs of the 2020/21 disease surveillance programs for EBL, bovine tuberculosis and JD in cattle

<b>Expenses</b>	<b>\$</b>
Employee expenses	23 006
Laboratory costs	39 386
Travel	5 637
Supplies and services	4 261
Sale of goods	-2 199
<b>Total cost of program</b>	<b>\$70 091</b>

**IFS contributions funded surveillance for enzootic bovine leucosis, bovine tuberculosis and Johne’s disease in cattle at a total cost of \$70 091.**

## 6. 2020/21 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 *Biosecurity and Agriculture Management Act 2007*, 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 National Livestock Identification System (NLIS) is a national program. All sectors of the cattle industry are required to comply with NLIS regulations to enable lifetime traceability of each animal in the event of a disease outbreak or residue contamination. The program also gives markets confidence in Australia's product integrity. The national NLIS helpdesk, administered from Sydney, only gives advice on issues relating to the direct use of the NLIS database.

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.

**The IFS/CIBFSA funding enables the WA-based helpdesk to provide phone, email and onsite advice and support to help WA cattle producers comply with the NLIS regulations – from identification through to managing the movement of stock.**

During the year, the helpdesk responded to more than 16 370 enquiries (Table 2). In addition, 80 on-site visits were undertaken during the year, including training and field day events. A targeted program of onsite audits and visits conducted by DPIRD Biosecurity Officers complements the work of the helpdesk.

Table 2 – Helpdesk enquiries from July 2020 to June 2021

Regions	Telephone	Email	Total
Pastoral area	429	1188	1617
Agricultural area	3413	4222	7635
Other*	1382	5736	7118
<b>Total</b>	<b>5224</b>	<b>11 146</b>	<b>16 370</b>

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

The total cost of this service in 2020/21 was \$119 176, of which \$39 726 was funded by the CIBFSA (Table 3).

Table 3 – Costs of the 2020/21 NLIS cattle helpdesk

Item	\$
Employee expenses	109 621
Travel	7 744
Communications	1 811
<b>Total cost</b>	<b>119 176</b>
CIBFSA contribution	-39 726
<b>Total cost to the Cattle IFS (ex-CICF)</b>	<b>\$79 450</b>



Image 8 – Angus cattle

## Biosecurity and traceability communications

The Biosecurity and Traceability Communications project delivered extension and communication activities to augment the work already undertaken through the NLIS helpdesk. The purpose of the project was to enhance compliance with NLIS reporting and recording for WA cattle.

During 2020/21, 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 given the work undertaken through this project
- 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 a number of infographics, messaging and QR codes to use in communications
- Produced an array of materials to promote traceability and biosecurity including 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. Signage was also developed to promote accurate destination addresses and PICs for supply chain locations, and how to check that a PIC is valid.
- Developed a number of communications activities, including radio, print and online advertisements, newsletter articles, social media posts, YouTube 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.

Table 4 – Biosecurity and Traceability Communications project costs

Item	\$
Advertising and promotion	17 018
Consultant	11 540
Other	1 350
Venue hire	906
Communications	467
Staff travel	142
<b>Total cost of program</b>	<b>\$31 423</b>

## 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 bacterium in the faeces until 2-6 years after being infected. Furthermore, shedding of the bacterium in the faeces is intermittent. By the time clinical symptoms occur, the animal will have been carrying the bacterium for at least two years (and possibly up to six years) and will have shed the bacterium, 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 bacterium 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 enzyme-linked immunosorbent assay (ELISA) on serum and high throughput Johne's polymerase chain reaction (HT-J PCR) on faeces) as well as HT-J 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). This included ‘neat’ and diluted samples, blanks, negative and positive control wells, as well as wells spiked with artificial DNA to identify cross-over or contamination. In the upcoming financial year, the data will be analysed using alternative bioinformatics programs to compare the accuracy, time taken to do the analysis and the ease of use of different programs.

Table 5 – Initial results 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

Diluted samples gave the greatest number of positive results, suggesting that substances in the blood, such as iron, can inhibit the reaction. Diluting the samples dilutes the inhibitors but may also dilute the sample to such an extent that a false-negative may arise. Further work will be undertaken to determine if another DNA extraction method can overcome or reduce inhibition.

Work on Aim #2 is ongoing; and Aim #3 will be investigated in the future. The amount of funding paid from the IFS Account for this research in 2020/21 is shown at Table 6.

Table 6 – Amount paid to the NGS research project in 2020/21 from the IFS Account

Expenses	\$
Employee expenses	7 490
<b>Total</b>	<b>\$7 490</b>



## 8. 2020/2021 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 \$5 584 649 at 30 June 2021. This included \$4 980 366 of ex-CICF funds and \$604 283 of IFS funds.
- The total cost of the ongoing surveillance programs in 2020/21 was \$70 091<sup>2</sup>.
- The 2020/21 NLIS cattle helpdesk project cost \$119 176, with one-third of these costs provided by the CIBFSA<sup>2</sup>.
- \$26 929 was spent on the Biosecurity and Traceability Communications project.
- Research into the NGS technique cost \$7490.
- Industry contributions to the IFS totalling \$181 066 were received by DPIRD in 2020/21; however, \$14 of this was reimbursed to a producer that opted out of the Scheme in the previous financial year.
- Interest applied to the IFS funds amounted to \$2473; and \$16 332 of interest was applied to the ex-CICF.
- The Committee costs amounted to \$21 643.

Tables 7 and 8 contain the financial details for the 2020/21 Cattle IFS. Figure 2 identifies how the funds held in the IFS Account were used during the year.



Image 9 – Cattle

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<sup>2</sup> Some of the costs of the 2020/21 programs were deducted from the Account during the 2021/22 financial year.

Table 7 – Cattle IFS income and expenditure for 2020/21

Expenses	IFS (\$)	Ex-CICF (\$)	Total (\$)
Programs:			
Ongoing surveillance	70 091	-	70 091
NLIS helpdesk	-	119 176	119 176
NGS research	7 490	-	7 490
Biosecurity and traceability communications	-	26 929	26 929
Other expenses:			
Travel expenses	5 854	-	5 854
Board fees	5 264	-	5 264
Professional fees	4 217	-	4 217
Meeting expenses	3 266	-	3 266
Advertising/media	2 856	-	2 856
Printing & stationery	183	-	183
2019/20 opt out refunds	14		14
Communications	3	-	3
<b>Total expenses</b>	<b>99 238</b>	<b>146 105</b>	<b>245 343</b>
<b>Income</b>			
Contributions	181 066	-	181 066
CIBFSA	-	37 545	37 545
Interest revenue	2 473	16 332	18 805
<b>Total income</b>	<b>183 539</b>	<b>53 877</b>	<b>237 416</b>
<b>NET COST OF SERVICE</b>	<b>-84 301</b>	<b>92 228</b>	<b>7 927</b>

Table 8 – Balance sheet for the Cattle IFS

Balance sheet	IFS (\$)	Ex-CICF (\$)	Total (\$)
<b>EQUITY at 30 June 2021</b>	<b>604 283</b>	<b>4 980 366</b>	<b>5 584 649</b>

Note: the amounts shown in Table 7 for the ongoing surveillance program and the NLIS helpdesk are the total costs of the 2020/21 programs. Some of these costs were debited from the Account during the 2021/22 financial year. As the NGS research and Biosecurity and Traceability Communications project are not annual programs, the amount shown in Table 7 is the actual expenditure from the Account for these items. The balance sheet (Table 8) identifies the actual equity at 30 June 2021.

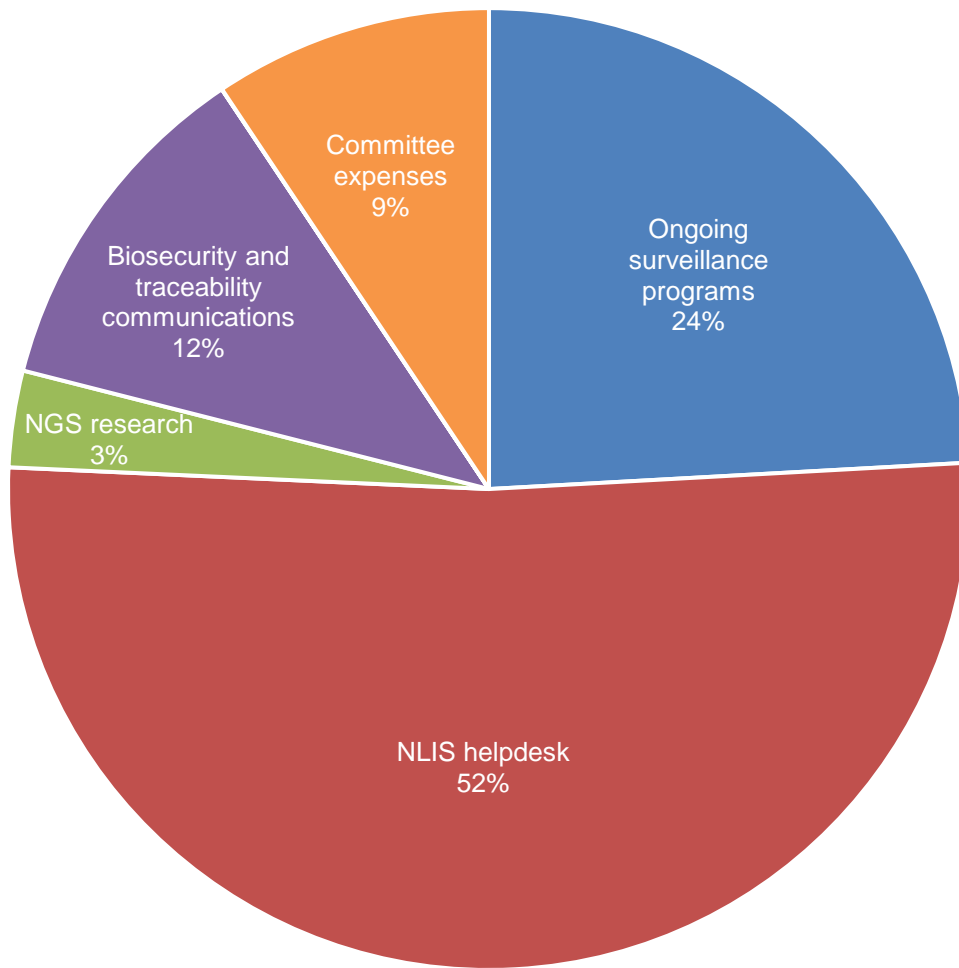


Figure 2 – Use of funds held in the Cattle IFS Account during 2020/21

**The net cost of service for the 2020/21 Cattle Industry Funding Scheme was \$7927.**

## 9. Direction for 2021/2022

The Industry Management Committee will continue to work with DPIRD and the WA cattle industry to ensure JD (c-strain) in cattle is addressed in such a way to achieve a level of risk mitigation equivalent to that which was in place prior to deregulation<sup>3</sup>.

The Committee will also be reviewing the applications submitted through the open call for research and development projects that was initiated in June 2021. The Cattle IFS Biosecurity Research and Development Program will support biosecurity-related research and innovation projects that will benefit the WA cattle industry by:

- improving cattle health
- increasing productivity
- increasing profitability
- helping develop sustainable industry practice
- promoting market success; and/or
- enhancing industry capability.

Successful projects will be provided with funding of up to \$50 000 per year over a maximum of three years.

In partnership with DPIRD, the Committee will continue to monitor and manage the disease surveillance programs, the NLIS cattle helpdesk, the Biosecurity and Traceability Communications project and the NGS research.

The review of the IFS regulations undertaken in early 2021 was an important piece of work to evaluate the operation and effectiveness of the regulations. Such reviews are vital in ensuring the IFS regulations remain relevant and appropriate in light of the ever-changing operating environment. The Committee are looking forward to discussing the findings and recommendations from the review. If regulatory amendments are recommended, the Committee anticipate providing input to these to make certain any changes will meet the needs of the WA cattle industry and IFS contributors.

With the Grains, Seeds and Hay IFS and the Sheep and Goat IFS Management Committees, the Cattle IFS Management Committee will further explore a coordinated approach to IFS communications. This follows on from the joint IFS Committee meeting where a coordinated, collaborative approach to communications was identified as a key strategy for the future to improve producer awareness and understanding of the IFSs and increase engagement.

2021/22 will also see the Committee undertake its biennial review of its strategic plan.

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<sup>3</sup> At the time of writing, JD (c-strain) was detected in WA home-grown cattle. The industry decided that JD management would be deregulated in WA, as it is in other states/territories.

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.



Image 10 – Murray Gray cattle

## 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 2021

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	31 December 2021
John Giumelli*	Member	30 June 2022
Locky McTaggart	Member	30 June 2022
Chris Wyhoon	Member	30 June 2024

Renata Paliskis and John Giumelli resigned from the Committee in August 2021. Debbie Dowden was appointed as Deputy Chair.