

FOR INFORMATION

SWFSPP Annual Meeting 2020

Agenda Item 2.1

last updated: 22 December 2021

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QUEENSLAND AGENCY COORDINATOR REPORT 2020-21 year**RECOMMENDATION**

1. That the SWFSPP Steering Committee:
 - a. **NOTE** that Queensland met its obligations under the SWFSPP in 2020-21
 - b. **NOTE** the report by the Biosecurity Queensland coordinator about activities against the SWFSPP during 2020-21

BACKGROUND

1. This report describes activities by Biosecurity Queensland during the financial year 2020-21 against Biosecurity Queensland's national commitments as documented in the Screw-worm Fly Surveillance and Preparedness Program Business Plan July 2019-June 2022 version 1.2 (SWFSPP-BP).

DISCUSSION**2. ADULT FLY TRAPPING**

Biosecurity Queensland met its commitments to the SWFSPP, *except* that one adult fly trapping site (Trap 9) was not accessible for in 2020 due to COVID-19 leading to 2 of 36 (6%) trapping events not occurring. Trapping at Trap site 9 site resumed in January 2021.

PCR results by NAQS on one trap (Trap 8 set in Sept 2020) appeared to be 'positive'; however, technical staff reported there were indications it was probably a false positive.

In the absence of objective evidence that the trap contents were 'negative', the sample was initially reported as 'positive' to NAHIS with explanatory comment. The result had not been clarified by the time the relevant issue of AHSQ was published – the ambiguity was reported in the text of AHSQ Volume 5 Issue 3 as *'The OWS polymerase chain reaction (PCR) result from one trapping event during the quarter was inconclusive. Further testing to resolve this status is pending'* with a similar footnote to the Table 14 Summary of fly-trapping events conducted, 1 July 2019 to 30 September 2020.

In part due reagent supply issues, there was considerable delay in confirming that the original extraction that had tested 'positive' was indeed negative. Pending re-testing by NAQS efforts by BQ to further investigate the possibility of an incursion included:

- The remainder of the trap contents retained at BSL were examined microscopically – no flies consistent with SWF were identified
- BSL acquired the OW-SWF PCR test and tested the retained sample – result negative
- The 6 traps set in November were all set on the large property on which Trap site 8 is located to increase the likelihood of trapping an adult SWF if SWF incursion/establishment had occurred at that site. No adult SWF has been trapped at that time or since.
- While these negative results were consistent with SWF not being detected – they did not exclude the possibility that a single SWF had been destroyed in the preparation of the original PCR extraction, and consequently did not exclude the possibility that the contents of Trap 8 were positive.
- Retesting of the original extraction by NAQS using new reagents in early 2021 did finally exclude the possibility of that that subsample from Trap 8 had been, providing final evidence that the trap was negative.

Following retesting of the original extraction by NAQS, the report and comment to NAHIS was updated to 'negative'.

Resolution of this trap outcome was reported as a footnote to Table 17 Summary of fly-trapping events conducted, 1 January 2020 to 31 March 2021 in AHSQ Volume 26 Issue 1 *'The OWS PCR result that was reported as pending in AHSQ Volume 25 Issue 3, was confirmed as negative.'*

Biosecurity Queensland commitments	Performance and assessment
Agreed locations for adult fly trapping – Townsville Port (Appendix C)	Biosecurity Queensland continued to conduct adult SWF trapping near the Port of Townsville.
Port Trap sites Located in places attractive to SWF As close as possible (with 20 km) of the port	All traps are located well within 20Km of the port. No changes to trap locations were made during the year. One site (Trap 9 - JBS Townsville (TJBS)) was temporarily unavailable during 2020. See Map – Attachment A.

Biosecurity Queensland commitments	Performance and assessment
Frequency Required (sections 4.1 and 4.1.1) – ‘Targeted surveillance should be conducted no less frequently than quarterly’ and ‘a minimum of 36 trapping events per location per year (to provide at least 95% confidence of detecting a locally established SWF population over a 12 month period) Intention (Appendix C) – 6 traps x 6 times a year (every 2 months) at Townsville = 36 traps/year.	Biosecurity Queensland set 5 or 6 or traps near Townsville Port every 2 months 1. July 2020 – 5 traps (No access to Trap site 9) 2. Sept 2020 – 5 traps (No access to Trap site 9) 3. Nov 2020 – 6 traps (all set within the property of Trap site 8 to increase likelihood of detection of SWF incase incursion/establishment had occurred at that site prior to Sept 2020) 4. Feb 2021– 6 traps (usual locations) 5. March 2021 – 6 traps (usual locations) 6. May 2021 – 6 traps (usual locations) Total 34 of 36 intended trapping events (94%) done.
Methodology – in accordance with the AHA Work Instruction – adult fly trapping	Traps were set in accordance with the AHA work instruction. There were no field operational issues. Two of six traps were replaced due to wear and tear, Trap 4 was re-positioned a few meters due to the tree it was mounted on being blown over.
Trap performance	One of 34 trap events (3%) caught no flies. It was one of 6 traps set on the Trap-site 8 property in November 2020. The other 5 traps on the property caught flies. Median SWF-sized catch number = 67 Six of 34 trap events (18%) collected a large number of flies (>1,000 to ~32,000) • Trap 2 (once) Feb 2021 • Trap 8 (three times) Sept 2020 and Feb and March 2021. • Trap 9 (twice) Feb and March 2021

Biosecurity Queensland commitments	Performance and assessment
Laboratory Testing	Trap contents are examined microscopically to exclude OW-SWF, NW- SWF, and Warble fly at BSL if contents are < 1,000 insects. Trap contents > 1,000 are subsampled and subsamples are tested by PCR for SWF only. • During July 2020 - Feb 2021, subsamples for PCR testing were referred to NAQS • BSL acquired the OW-SWF PCR and as of March 2021 PCR testing of large samples has been done at BSL. • Queensland and AHA negotiated that PCR testing at BSL be claimed at the rate of the Qld govt service fee for that test.
Reporting Due quarterly – in time for publication of summary data in <i>Animal Health Surveillance Quarterly</i>	Data was reported quarterly to NAHIS and published in AHSQ.
Invoicing	All claimed payments were drawn from the 2020-21 SWF budget.

2. TARGETED MYIASIS INSPECTIONS

Biosecurity Queensland had no national commitments for active targeted myiasis inspection.

Queensland continues to believe that active myiasis inspections of unwounded animals that have been resident near a high-risk site for less than 10 days (e.g., those passing through an export depot or abattoir) is not an effective form of surveillance.

The presence or absence of myiasis of animals in transit via Townsville would reflect the SWF status of the low-risk location the animal came from and not the high-risk inspection site in Townsville.

3. DESCRIBE AND ASSESS PASSIVE SURVEILLANCE

Public - SWF myiasis in humans

SWF myiasis in humans is not a notifiable disease in Queensland or nationally.

To our knowledge – there were no SWF myiasis exclusions in humans in Queensland

Animal – SWF myiasis in animals

Normal business (government officers) and passive surveillance by private veterinarians

- Biosecurity Queensland received **one (1) submission of maggots for SWF exclusion**, one from a private veterinarian (see Attachment B).

The following activities by inspectors, third party providers, and government and private veterinarians provide considerable opportunity for passive surveillance for SWF myiasis.

- As part of normal business – government veterinary officers and biosecurity inspectors do approximately ~300 disease investigation (mainly cattle) per year. Inspectors also attend sale yards to inspect waybills and all stock in the yards at that time. Some of this work was curtailed in 2020 due to COVID-19. Inspectors also attend other venues with stock, and both biosecurity inspectors and third-party providers conduct a large number of tick inspections throughout the year.
- Private veterinarians made approximately 2,000 submissions of samples to Queensland Biosecurity Surveillance Laboratory (BSL) for animal disease investigation. These investigations presumably included examination of the animals from which samples were taken.

While these activities are often conducted at locations other than the higher risk locations near Townsville and Brisbane Ports and are not specifically targeted or biased towards SWF myiasis detection, anecdotally these activities are consistent with, and provide support for, Queensland's claim of freedom from SWF.

4. AWARENESS COMMUNICATIONS

Biosecurity Queensland remains in contact with Queensland Health for all zoonoses. There were no communications activities specific for SWF myiasis in humans.

Promotion of SWF awareness – Biosecurity Queensland operational staff

An internal [SWF SharePoint](#) site has been maintained that collates resources related to SWF surveillance as a 'one-stop-shop' – including those from AHA, Biosecurity Queensland and elsewhere. All veterinary officers and biosecurity inspectors in Queensland have been provided with the AHA produced maggot collection kits and brochures.

Promotion of SWF awareness – general public

- Biosecurity Queensland maintains a SWF webpage <https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/livestock/animal-welfare/pests-diseases-disorders/screw-worm-fly>
- Social media post - [\(20+\) Facebook](#) 6 May 2021 (159 reactions, 21 comments, 214 shares, 25,977 reach)

Promotion of SWF awareness – Private veterinarians

- Vet (AVA/Vet Surgeon's board?) newsletter article (see Attachment C) – done in response to concerns re 'positive' PCR detection to enhance private vet awareness/surveillance.

5. FINANCIAL IMPLICATIONS

The cost to Biosecurity Queensland of contributing to and delivering on the SWFSPP (field and laboratory work and coordination) is considerably higher than the payments available for SWF trapping.

However, Biosecurity Queensland is a strong supporter of the national program and believes that the program makes a significant contribution to Australia's capacity to credibly claim freedom from SWF and to detect an incursion of SWF. Biosecurity Queensland also acknowledges that the national coordination via AHA is very valuable. In particular efforts to improve our preparedness by putting in place APVMA permits and 'ready-to-go'

conventional treatment protocols (which chemicals to use, dose, frequency etc) will be extremely helpful in the unlikely event of an incursion.

6. CONSULTATION/COMMUNICATION

Not applicable.

7. NEXT STEPS/ACTIONS

Continue ongoing program activities.

Attachment A: *Map of SWF trapping sites near Port of Townsville – Queensland*

Attachment B: *Screw-worm fly myiasis exclusions in Queensland by Biosecurity Queensland, 2020-21*

Attachment C: *'Alert' article submitted for vet newsletter*

FEEDBACK

Q1 My organisation's needs and expectations of the SWFSPP are being met.				
Strongly agree	Agree	Undecided	Disagree	Strongly disagree
The existence of the SWFSPP creates and drives incentives for SWF awareness, surveillance and preparedness activities that would otherwise not occur. The program is a very effective framework for bringing together and maintaining effective relationships between national experts.				

Q2 The outputs of the SWFSPP such as the brochure, poster and annual report in the Animal Health in Australia report are credible and robust.				
Strongly agree	Agree	Undecided	Disagree	Strongly disagree
The current brochure and poster are good. The usual Face-2-face annual committee meeting is a valuable opportunities to coordinate and share awareness of agency efforts. Due to COVID the multiday meeting has been reduced to a videoconference. While an appropriate substitute under COVID-19 its effectiveness in creating strong, open and positive professional relationships on which to base constructive critical review of the program need to be considered.				

Q3 The SWFSPP satisfies the surveillance data and reporting [and preparedness] needs of my organisation (e.g. contributes to and/or supports policy development and decision making).				
Strongly agree	Agree	Undecided	Disagree	Strongly disagree
In the absence of the program, a functioning national network of data and policy expertise on SWFSPP would probably not exist. Not having a PCR test for New World SWF is a gap in our surveillance capacity that should be resolved via this program, particularly given 2 of 3 SWF detections in Australia have been of NW-SWF in human travelers returning from South America (Searson <i>et al</i> 1992 and Lau <i>et al</i> 2015), suggesting travelers with NW-SWF (not livestock vessels with OW-SWF) are the most likely route of incursion/establishment. While noting efforts to date - not having AVPMA approvals and 'operational-ready' protocols for the use of conventional insecticides in the event of an incursion/establishment continues to be a serious gap in national SWF preparedness.				

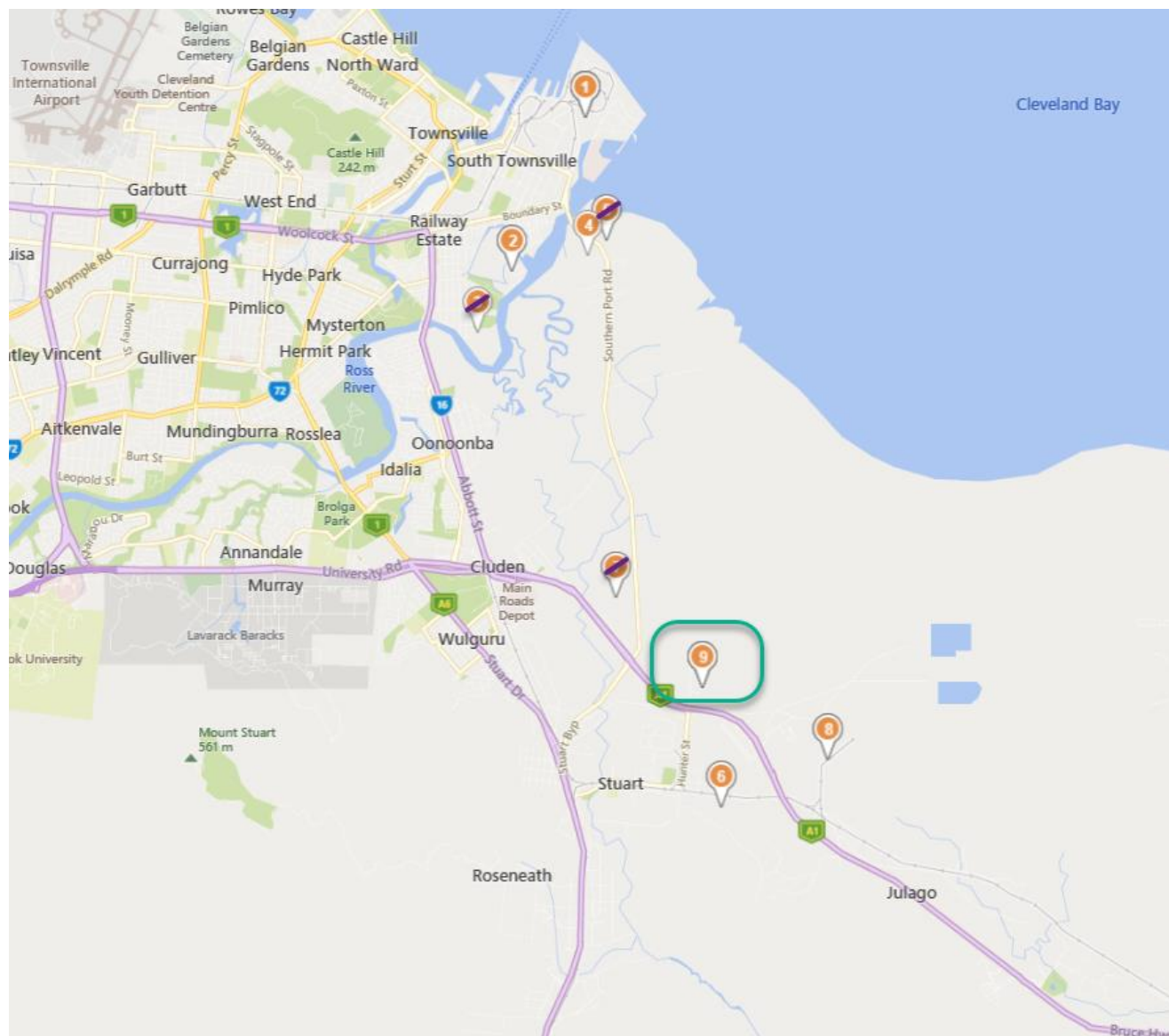
Q4 Animal Health Australia is managing the Screw Worm Fly Surveillance and Preparedness Program effectively/satisfactorily.				
Strongly agree	Agree	Undecided	Disagree	Strongly disagree
There are activities that the committee has agreed to undertake (NW-SWF PCR test and ready-to-use chemical use permits and protocols for a response) that should be incorporated into the plan as outcomes (e.g. response preparedness) and outputs (e.g. NW-SWF PCR).				

Attachment A: Map of SWF trapping sites near Port of Townsville – Queensland

+ new item
Map All Items Find an item

Trap Number

- Port of Townsville**
Trap Number : 1
Post Code : 4810
Latitude : -19.25552
Longitude : 146.83775
- Ross Island Barracks**
Trap Number : 2
Post Code : 4810
Latitude : -19.27669
Longitude : 146.82716
- Community Garden**
Trap Number : 3
Post Code : 4810
Latitude : -19.28511
Longitude : 146.82211
- Environmental Reserve - WEST**
Trap Number : 4
Post Code : 4810
Latitude : -19.27449
Longitude : 146.83817
- Environmental Reserve - EAST**
Trap Number : 5
Post Code : 4810
Latitude : -19.27246
Longitude : 146.84084
- Prison Farm**
Trap Number : 6
Post Code : 4811
Latitude : -19.35011
Longitude : 146.85744
- Colinta Holdings**
Trap Number : 7
Post Code : 4811
Latitude : -19.32131
Longitude : 146.84223
- Julago Livestock Handling Facilities**
Trap Number : 8
Post Code : 4816
Latitude : -19.34361
Longitude : 146.87296
- JBS Townsville**
Trap Number : 9
Post Code : 4811
Latitude : -19.3337535
Longitude : 146.8547515



KEY Sites no longer in use marked out.

Trap 9 JBS Townsville was not accessible during 2020.

Attachment B: Screw-worm fly myiasis exclusion in Queensland by Biosecurity Queensland, 2020-21

Job number	Sampled or received date	HOST species	Location (LGA in words)	PARASITE species	Laboratory diagnostic comment	History	Submitter
P20-04657	27 November 2020	Leatherhead friarbird (<i>Philemon corniculatus</i>)	Edmonton, Cairns 4869	Passeromyia indecora	3 x third instar larvae	Nestling fell out of nest, struggling to eat, extremely emaciated. Head swollen with oral discharge. Three larvae removed from face.	North QLD Vet Service
P21-01813	18 May 2021	Cat	Brisbane	Chrysomya bezziana (Old World Screwworm)	Chrysomya sp., 3rd instar larvae	Maggots collected from wound on cat's prepuce	RSPCA

Attachment C: 'Alert' article submitted for vet newsletter

The most serious exotic pest threatening Australia's animal industries

Veterinarians are urged to be on the lookout for signs of the most serious exotic pest threat to Australia's animal industries, screw-worm fly.

It preys on warm-blooded animals, including people, with the maggots feeding on living flesh.

If this pest established in Queensland it would have a major impact on livestock, domestic animals and human health.

Screw-worm fly is found in Papua New Guinea, putting Queensland at risk of an incursion. It could be introduced by the fly being carried on a storm front, on a boat or plane, or as maggots within a wound.



Screw-worm fly maggot and adult fly

Help protect Queensland from this threat.

Look for pale, off-white maggots deep in the wounds of mammals and birds, and report and submit suspicious maggots to the Biosecurity Sciences Laboratory for identification. Maggots should be submitted from flystrike in cattle and deep flystrike lesions in other animals.

Likely wound infestation sites in animals include:

- newborns – navel region
- perinatal – vulva or perineum of dam
- husbandry wounds – dehorning, castration, branding, tail docking or ear tagging
- trauma sites – barbed wire, horns or other penetrating objects
- skin punctures – from vaccination, ticks or buffalo fly
- sheep – mulesing wounds, medial canthus of the eye or the perineal region without obvious trauma
- dogs – weeping skin sores, wounds from fighting, anal gland abscesses, pododermatitis, eye and ear discharges and lip fold eczema.

Read about [collecting and submitting samples](#) to the [Biosecurity Sciences Laboratory](#). You can also watch Animal Health Australia's [sample collection video](#) and call Biosecurity Queensland on 13 25 23 for a free maggot collection kit.

If you suspect screw-worm fly you must report it immediately to **Biosecurity Queensland** on 13 25 23 or the **Emergency Animal Disease Watch Hotline** on 1800 675 888.