FOR INFORMATION

SWFSPP Annual Meeting 2023
Agenda Item 2.1
[last updated: 9 September 2023]
Prepared by Dr WC Janson

WA COORDINATOR REPORT 2022-23 year

RECOMMENDATION
That the SWFSPP Steering Committee

1. **NOTE** the information provided by Western Australia in this report.
2. **AGREE** the southern trap sites (Geraldton and Fremantle) can continue to be set and collected on a monthly basis rather than the 10-day interval for trap set period required in the tropical locations.

BACKGROUND

2. This report details the activities undertaken by Western Australia during the financial year 2022-2023.

3. As of April 2023, Dr Will Janson has taken over SWFSPP coordination in Western Australia from Dr Graham Mackereth.

4. The SWFSPP (fly trapping) monitors the most likely points of entry – returning livestock vessels for live export of animals, livestock congregation areas associated within the local vicinity of ports. In Western Australia these ports include Wyndham, Broome, Geraldton and Fremantle.

5. The SWFSPP (myiasis) is targeted surveillance conducted at the same time as tick inspections, NAMP surveillance, general disease investigations and welfare investigations. The cattle represent a subset of the cattle in the Kimberley region of WA. The tick inspection provides an ideal opportunity to inspect wounds closely and despite having been treated prior to inspection it is believed any established infestation would remain evident even if the maggots had been killed by the dip chemical.

DISCUSSION

6. ADULT FLY TRAPPING

During 2022-2023, trapping was completed as per the program's standard operating procedures. It was conducted at:

- Kununurra
  - Traps are located at the holding yards supplying the Wyndham port.

- Broome

  - Traps are located at Broome Common Export Depot serving as a trapping location for the port of Broome. Broome Common is 15km from the port.
  - A recent suggestion has been made to relocate one of these traps to the Pony Club in Broome to cover a larger area of surveillance.

- Geraldton
  - Traps are located at cattle yards approximately 5km from port.

- Fremantle
  - All traps are located at Muchea sale yards. The sale yards are approximately 70km from Fremantle Port.

Collections from traps are sent to the DDLS laboratory in Perth for analysis by Entomologists.

The southern trap locations can be logistically difficult to access on the 10-day turnaround time for traps as documented in the Program's Procedures.
These trap sites have not experienced fly deterioration in the 30-day collection.
Fly numbers do not require PCR testing as always less than 1000 flies.
Western Australia requests the committee consider a longer trapping duration for the Fremantle and Geraldton locations. WA proposes the extended trapping duration can be documented in the "comments" data field.

Table 1. Data collated for the 2022-2023 trapping season from July 2022 to July 2023.

Location	Insect	Diptera	*Calliphoridae* Family not including *C.Bezziana* (OWSWF) & *C. hominivorax* (NWSWF)*	*Chysomya* genus but not *C. bezziana* (OWSWF)^	*Sarcophagidae* but not *Wohlfahrtia magnifica*~
All sites	**127 780**	**114 748**	**2372**	**2228**	**355**
Wyndham	**5378**	**5378**	**718**	**709**	**3**
Trap 1	1360	1360	566	546	-
Trap 2	825	825	1281	6	2
Trap 3	5648	5648	189	1514	1
Broome	18196	15174	565	680	178
Trap 1	13593	10571	464	575	80
Trap 2	4285	4285	90	94	74
Trap 3	332	332	11	11	16
Geraldton	62684	62684	84	30	84
Trap 1	10367	10367	33	16	19
Trap 2	49140	49140	36	12	60
Trap 3	2999	2999	15	2	5
Fremantle	6646	6646	716	709	3
Trap 1	1360	1360	566	546	x

Trap 2	825	825	1281	6	2
Trap 3	5648	5648	189	1514	1

* The presence of 2372 members of the Calliphoridae family is encouraging as the New World SWF species are in this family. If we assume trapping is equally effective within the family, then we could expect surveillance to detect SWF if locally established.

^ The presence of 2228 members of the Chysomya genus is encouraging as the Old World SWF species is in this genus. If we assume trapping is equally effective within the genus, then we could expect surveillance to detect OWSWF if present.

~ The presence of 355 members of the Sarcophagidae family is encouraging as the spotted flesh fly (*Wohlfahrtia magnifica*) should have been detected if present. If we assume trapping is equally effective within the family, then we could expect surveillance to detect spotted flesh fly if present. Lab reports specifically noted that the flies were not *Wohlfahrtia magnifica*.

Table 2. Dipterid families trapped all sites by financial year.

Family	2017	2018	2019	2020	2021	2022	2023
Asilidae		1					
Bibionidae		1					
Calliphoridae		3292	5680	3798	2624	3924	2372
Cchloropidae						31	
Cecidomyiidae			4	4			
Ceratopogonidae				22	4	230	
Chloropidae		3			7	147	16
Coelopidae			3				42
Culicidae			2	1	5		
Drosophilidae		3					
Formicidae						50	374
Hymenoptera						54	374
Lauxaniidae			2				
Milichiidae		4120	9135	10728	14785	886	3381
Muscidae	7	1976	2423	10749	9743	34369	10107
Mycetophilidae			9				
Oestridae			2				
Otitidae	1	33659	59313	88911	64702	146738	70719
Phoridae		1	21	20	40	40	1
Psychodidae		1	20	4	7	68	4
Sarcophagidae		1613	671	398	302	475	355
Scatopsidae		13				546	1
Sciaridae		1	78	12	10	3	
Sepsidae		7	51	17		2	
Total	8	44691	77414	114664	92229	187563	87746

% Calliphoridae	0%	7%	7%	3%	3%	2%	3%

The traps are in good order, following maintenance and replacement of broken parts.
Bi-catch is low (see Table 3.)

Table 3. Bi-catch in FY 2018 -2023

order	Number	Accessions
Apoidea	90	2
Araneae	41	27
Blattodea	3	3
Choloptera	2	1
Coleoptera	219	112
Formicidae	118	11
Helicoidea	1	1
Hemiptera	21	21
Hypmenoptera	56367	103
Lepidoptera	76	40
Lepidotera	3	1
Nematocera	26	11
Orthoptera	16	9

An ant invasion at Broome Common resulted in 50,000 ants in a trap. Ant granules have been used where ants have previously impacted the traps (Wyndham and Broome). Hydramethylnon is the active ingredient used and appears safe. It is not used where stock have direct access. See MSDS http://npic.orst.edu/factsheets/hydragen.pdf.

Table 4. Total number of insects trapped by location and FY year.

Location	2017	2018	2019	2020	2021	2022	2023
All sites	10227	45314	77405	114674	92229	198563	127780
Broome	5873	32727	58233	69369	59858	8184	18196
Fremantle	123	1865	4478	2358	4601	135485	6646
Geraldton	1075	8588	11228	19128	24379	32034	62684
Port Hedland				241	76		
Wyndham	3156	2134	3466	23578	3315	22860	5378

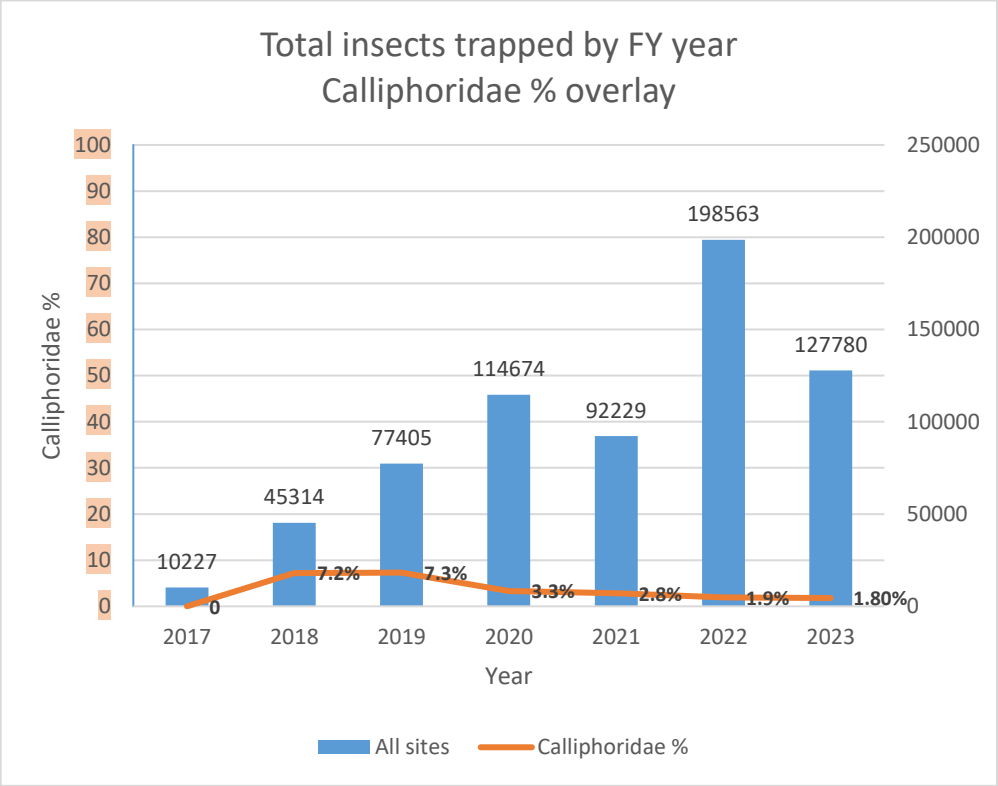

Figure 1. Total insect trapped by financial year with Calliphoridae% overlay.

The surveillance appears to be effective for the target species. Of the potential 144 trapping events (4 ports with 3 traps each trapping for 12 months of the year) there were 127 events where adult flies were trapped. The remaining 17 potential trapping events returned a 0 score for various reasons including traps falling in a storm, no flies trapped or broken traps that required replacement.

Of the 144 potential trapping events for 2022-2023 there were 127, 780 flies caught ranging from 1 per species, up to 10,000 for a single species.

7. MYIASIS INSPECTIONS

As mentioned above, myiasis inspections occur as when cattle congregated in export depot and inspected closely for evidence of ticks, NAMP surveillance, general disease investigations and welfare investigations. The majority of myiasis inspections are being conducted at Broome Common as part of cattle tick surveillance. Approximately 350-500 cattle are inspected per inspection event. The animals are inspected for wounds, and if they contain any fly maggots, samples would be collected and sent to DDLS for identification. Broome Common did not submit any fly maggots for 2022-2023.

Table 5. Number of inspections of cattle for wounds and myiasis at Broome Common over the past 4 financial years and total wounds observed.

Month	2019	2020	2021	2022	2023	Total wounds observed
July	3574	6076	1715	4030	4119	21
August	1501	5722	1573	2655	1506	16
September	619	3166	550	2895	1270	8
October		1190	812	1903	714	4
November		1030	495	988	629	1
December					*	
January	16				*	0
February				25	*	0
March	375				*	0
April	807	1849	329	576	*	0
May	5906	2969	3022	2051	*	5
June	6282	2497	3287	129	1101	5
Total	19080	24499	11783	15252	9339	55

* There are no inspections to report for Jan – March 2023. Broome Common was not open for any livestock receivals due to the unfortunate collapse of the Fitzroy Crossing bridge disconnecting the West Kimberley from the East Kimberley.

The number of wounds observed has declined. The practice of keeping wounded animals in a hospital pen at Broome Common has been discouraged for welfare reasons. No wounds have had fly maggots.

SWF kits and information were distributed at producer meetings and on station visits during the 2022-2023 financial year. Producers received post-mortem kits at the same time. SWF (both species) was excluded from 3 disease investigation submissions for the 2022-2023 financial year.

Table 6 Total submissions to DDLS for myiasis for 2022-2023

Year	Species	Reason for investigation	Finding	Outcome
2022 – Sep	Ovine	Passive	Myiasis	Negative
2023 - Feb	Bovine	Passive	Myiasis	Negative
2023 - Mar	Bovine	Passive	Myiasis	Negative

7. FINANCIAL IMPLICATIONS

Nil

8. CONSULTATION/COMMUNICATION

DPIRD has published a web page on SWF. https://www.agric.wa.gov.au/livestock-biosecurity/screw-worm-fly. This site provides a link to the AHA SWFSPP.

9. NEXT STEPS/ACTIONS

The internal process of compiling and reporting of the data will be reviewed as the program move towards AUSPestCheck at the beginning of 2024.

10. FEEDBACK

Q1	My organisations needs and expectations of the SWFSPP are being met.			
Strongly agree	Agree	Undecided	Disagree	Strongly disagree

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

Q3	The SWFSPP satisfies the surveillance data and reporting needs of my organisation (e.g. contributes to and/or supports policy development and decision making).			
Strongly agree	Agree	Undecided	Disagree	Strongly disagree

Q4	Animal Health Australia is managing the Screw Worm Fly Surveillance and Preparedness Program effectively/satisfactorily.			
Strongly agree	Agree	Undecided	Disagree	Strongly disagree