



Questions on notice

Inquiry into the Game and Feral Animal Legislation Amendment

(Conservation Hunting) Bill 2025

Ned Makim | APDHA | September 02, 2025

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THE CHAIR: Thank you Mr Makim. I wonder, how many members, roughly, do you have in New South Wales at the moment?

1753

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The Hon. ROBERT BORSAK: Mr Makim, can you outline the research benefit of the data gathered in The Great Australian Pig Hunt that you recently finished?

See attached.

NSW SUMMARY

Jan 1 to Dec 31, 2024

Estimated pigs killed by recreational hunters

1,692,625

Average yield per active hunter

17.06 pigs a month

Estimated average expenditure per pig

\$60.67

Estimated value of pig hunting to the NSW (mostly rural) economy in direct spending

\$102,691,559

Circa \$1.97 million weekly

NATIONAL SUMMARY

Jan 1 to Dec 31, 2024

Estimated pigs killed by recreational hunters

5,387.412

Average yield per active hunter

17.06 pigs a month

Estimated average expenditure per pig

\$60.67

Estimated value of pig hunting to the National (mostly rural) economy in direct spending

\$326,854,286

Circa \$6.28 million weekly



Hunting for answers

HARNESSING THE POWER OF CITIZEN SCIENCE

Ned Makim and Mark Beattie | APDHA Research Unit | January 27, 2025

Key findings

THE ANNUAL REPORT ON THE FIRST GREAT AUSTRALIAN PIG HUNT

- Estimated feral pigs killed by hunters Australia-wide between January 1, 2024 and December 31, 2024:

5,387,412

- Estimated economic input by hunters targeting pigs Australia-wide between January 1, 2024 and December 31, 2024:

\$326,882,615

- Estimated cost per pig to hunters Australia-wide between January 1, 2024 and December 31, 2024:

\$60.67

- Estimated average (pig) yield per month, per hunter Australia-wide between January 1, 2024 and December 31, 2024:

17.06

- Estimated average active pig hunters expressed as a percentage of potential pig hunters Australia-wide between January 1, 2024 and December 31, 2024:

21.73%



The story in a nutshell

The Australian Pig Doggers and Hunters Association (APDHA) is in its 20th year of representing the interests of legal, ethical hunters who predominantly, but not exclusively, use dogs to locate pigs on public and private land (with permission) in Australia.

We are run by volunteers (who are all active hunters) although we do contract out secretarial and reception services.

Part of the APDHA's role, on behalf of members, is to develop ways to demonstrate the value of hunting to the community, the environment and the economy and offer leadership in a rapidly changing political landscape.

Our Research Unit collects and collates existing research relevant to pigs and hunting, develops and writes its own reports and creates and initiates its own data collection strategies using our unique position in the feral pig space.

What were the objectives of The Great Australian Pig Hunt

The objectives of The Great Australian Pig Hunt were threefold:

- To leverage the APDHA's relationship with hunters to gather data on how many pigs were killed by hunters, how many hunters were active at any one time and develop reasonable estimates of the economic impact of that activity.
- To expand discussion on feral pig management to recognise hunting as a tool in population control.

- To prompt discussion on how many feral pigs there are in the natural and agricultural environment with a view to reviewing existing estimates.

The methodology

The Australian Pig Doggers and Hunters Association invited all pig hunters to register for a competition which provided monthly and annual prizes on a lucky draw basis for participants who completed data sheets on the number of pigs killed, whether or not the pigs were male or female and whether or not the pigs were of breeding age or not. Breeding age was determined by whether or not the boars smelled 'rank' (the strong hormonal smell associated with sexually mature boars) and whether or not the females were more than 30kgs liveweight. We also asked for participants to note the local government area in which the pigs were killed, whether or not they were APDHA members and to provide photos of their hunts for public use.

Prizes were provided by hunting industry suppliers and individuals.

The data sheets were filled out on line on the APDHA website and collated at the end of each month into a spreadsheet to provide monthly numbers including the number of active hunters we could then compare to registered hunters to give us an indicative active hunting percentage.

We used a random number generator to select prize winners by comparing the random numbers to active hunter positions on the spreadsheet.

Prizes were distributed monthly and publicity about the prizes as well as photos of the hunts were used to create social and traditional media interest in the exercise and feral pig management in general terms.

Numbers generated by the contest were then extrapolated in the first instance, by comparing the active hunter number to the total pigs killed to provide an average yield per hunter. The active hunter percentage (of registered hunters) was then applied to the lowest estimated pig hunter population expressed in the APDHA's Keeping Count¹ review from 2022 to give us an estimated active hunter number (State and nationwide) with which to multiply the average yield. This gave us estimates of the actual yield by all active hunters.

We then used information contained in NSW State Government research^{2,3} which provided monthly expenditure estimates for pig hunters. The monthly estimated expenditure was multiplied by the estimated active pig hunting cohort and that figure divided by the estimated actual pig yield to give us an estimated expenditure per pig killed.

Advice on our methodology was sought from USQ Associate Professor Ben Allen and we attempted to faithfully follow his guidance.

We recognise the potential for criticism of our methodology and findings (constructive and otherwise) and welcome same in the interests of developing our capacity for credible data collection and analysis.



The Great Australian Pig Hunt began on January 1, 2024 and ran until December 31, 2024. These are the monthly results.

Jan	
Pig hunt total	4655
Male	2784
Female	1892
Registered Hunters	513
Active Hunters	235
% Of Registered Hunters Active	45.8
Average Jan Catch Per Active Hunter	19.8
Inferred national January catch Lowest national hunter est: 121,103 ¹ % Active rate of 45.8: 55,465 Av catch: 19.8	
1,098,207 (For NSW: 345,035 for example) <i>Based on an active hunter number of 17,426, ie 45.8% of 38,048¹</i> (For QLD: 224,393 for example) <i>Based on an active hunter number of 11,333 ie 45.8% of 24,745¹</i>	
Feb	
Pig hunt total	3429
Male	1913
Female	1537
Registered Hunters	641
Active Hunters	175
% Of Registered Hunters Active	27.30
Average Feb Catch Per Active Hunter	19.59
Inferred national February catch Lowest national hunter est: 121,103 ¹ % Active rate of 27.30: 33,061 Av catch: 19.59	
647,665 (For NSW: 203,483 for example) <i>Based on an active hunter number of 10,387, ie 27.3% of 38,048¹</i> (For QLD: 132,338 for example) <i>Based on an active hunter number of 6755 ie 27.3% of 24,745¹</i>	

Mar	
Pig hunt total	2985
Male	1737
Female	1269
Registered Hunters	698
Active Hunters	177
% Of Registered Hunters Active	25.4
Average Mar Catch Per Active Hunter	18.75
Inferred national March catch Lowest national hunter est: 121,103 ¹ % Active rate of 25.4: 30,760 Av catch: 18.75	576,753 (For NSW: 181,200 for example) <i>Based on an active hunter number of 9664, ie 25.4% of 38,048¹)</i> (For QLD: 117,848 for example) <i>Based on an active hunter number of 6285 ie 25.4% of 24,745¹)</i>
Apr	
Pig hunt total	2446
Male	1436
Female	1031
Registered Hunters	608
Active Hunters	158
% Of Registered Hunters Active	25.9
Average Apr Catch Per Active Hunter	15.48
Inferred national April catch Lowest national hunter est: 121,103 ¹ % Active rate of 25.90: 31,366 Av catch: 15.48	485,541 (For NSW: 152,547 for example) <i>Based on an active hunter number of 9854, ie 25.90% of 38,048¹)</i> (For QLD: 99,211 for example) <i>Based on an active hunter number of 6409 ie 25.90% of 24,745¹)</i>
May	
Pig hunt total	2039
Male	1190
Female	872
Registered Hunters	641
Active Hunters	153
% Of Registered Hunters Active	23.8
Average May Catch Per Active Hunter	13.33
Inferred national May catch Lowest national hunter est: 121,103 ¹ % Active rate of 23.80: 28,823 Av catch: 13.33	384,204 (For NSW: 120,709 for example) <i>Based on an active hunter number of 9055, ie 23.80% of 38,048¹)</i> (For QLD: 78,505 for example) <i>Based on an active hunter number of 5889 ie 23.80% of 24,745¹)</i>
Jun	
Pig hunt total	2249

Male	1251
Female	1018
Registered Hunters	657
Active Hunters	125
% Of Registered Hunters Active	19.03
Average Jun Catch Per Active Hunter	17.99
Inferred national June catch	
Lowest national hunter est: 121,103 ¹	414,598
% Active rate of 19.03: 23,046	(For NSW: 130,266 for example)
Av catch: 15.48	Based on an active hunter number of 7241, ie 19.03% of 38,048 ¹)
	(For QLD: 72,895 for example)
	Based on an active hunter number of 4709 ie 19.03% of 24,745 ¹)
Jul	
Pig hunt total	2556
Male	1443
Female	1134
Registered Hunters	679
Active Hunters	131
% Of Registered Hunters Active	19.29
Average Jul Catch Per Active Hunter	19.5
Inferred national July catch	
Lowest national hunter est: 121,103 ¹	460,805
% Active rate of 19.29: 23,361	(For NSW: 143,130 for example)
Av catch: 19.5	Based on an active hunter number of 7340, ie 19.29% of 38,048 ¹)
	(For QLD: 93,074 for example)
	Based on an active hunter number of 4773 ie 19.29% of 24,745 ¹)
Aug	
Pig hunt total	1378
Male	762
Female	637
Registered Hunters	691
Active Hunters	103
% Of Registered Hunters Active	14.9
Average Aug Catch Per Active Hunter	13.38
Inferred national Aug catch	
Lowest national hunter est: 121,103 ¹	241,429
% Active rate of 14.9: 18,044	(For NSW: 75,851 for example)
Av catch: 13.38	Based on an active hunter number of 5669, ie 14.9% of 38,048 ¹)
	(For QLD: 49,332 for example)
	Based on an active hunter number of 3687 ie 14.9% of 24,745 ¹)
Sep	
Pig hunt total	1816
Male	1060
Female	777
Registered Hunters	719

Active Hunters	103
% Of Registered Hunters Active	14.3
Average Sep Catch Per Active Hunter	17.3
Inferred national September catch	
Lowest national hunter est: 121,103 ¹	299,597
% Active rate of 14.3: 17,318	(For NSW: 94,127 for example)
Av catch: 17.3	Based on an active hunter number of 5440, ie 14.3% of 38,048 ¹)
	(For QLD: 61,217 for example)
	Based on an active hunter number of 3539 ie 14.3% of 24,745 ¹)
Oct	
Pig hunt total	1817
Male	1017
Female	821
Registered Hunters	631
Active Hunters	105
% Of Registered Hunters Active	16.64
Average Oct Catch Per Active Hunter	17.3
Inferred national Oct catch	
Lowest national hunter est: 121,103 ¹	348,622
% Active rate of 16.64: 20,152	(For NSW: 109,530 for example)
Av catch: 17.3	Based on an active hunter number of 6331, ie 16.64% of 38,048 ¹)
	(For QLD: 71,234 for example)
	Based on an active hunter number of 4118 ie 16.64% of 24,745 ¹)
Nov	
Pig hunt total	1615
Male	932
Female	704
Registered Hunters	718
Active Hunters	94
% Of Registered Hunters Active	13.1
Average Nov Catch Per Active Hunter	17.18
Inferred national Nov catch	
Lowest national hunter est: 121,103 ¹	272,544
% Active rate of 13.1: 15,864	(For NSW: 85,625 for example)
Av catch: 17.18	Based on an active hunter number of 4984, ie 13.1% of 38,048 ¹)
	(For QLD: 55,698 for example)
	Based on an active hunter number of 3242 ie 13.1% of 24,745 ¹)
Dec	
Pig hunt total	1596
Male	983
Female	635
Registered Hunters	687
Active Hunters	106
% Of Registered Hunters Active	15.4

Average Dec Catch Per Active Hunter	15.06
<i>Inferred national Dec catch</i>	
Lowest national hunter est: 121,103 ¹	280,869
% Active rate of 15.4: 18,650	(For NSW: 88,237 for example)
Av catch: 15.06	<i>Based on an active hunter number of 5859, ie 15.4% of 38,048¹</i>
	(For QLD: 57,393 for example)
	<i>Based on an active hunter number of 3811, ie 15.4% of 24,745¹</i>

THE 2024 TOTALS

2024	
Pig hunt total	28,581
Male	16,246
Female	12,327
% Of Registered Hunters Active	21.73
Average Apr Catch Per Active Hunter	17.06
<i>Inferred national annual catch</i>	
Lowest national hunter est: 121,103 ¹	5,387,412
% Active rate of 21.73 26,316	For example
Av monthly catch: 17.06	For NSW: 1,692,625
	<i>Based on an active hunter number of 8268, ie 21.73% of 38,048¹</i>
	For QLD: 1,100,779.44
	<i>Based on an active hunter number of 5377, ie 21.73% of 24,745¹</i>

WHAT IS INFERRED NATIONAL/NSW/QLD CATCH?

This figure represents the inference drawn from the month's/year's activity when applied to the lowest estimate of total national pig hunters reported in the APDHA's Keeping Count document.

The inference is that the activity rate in the competition and the average catch rate of those active hunters is transferable to the number of pig hunters nationwide to provide an estimate of the total pigs killed in Australia in each month and for the year.

Further, Keeping Count breaks down estimates State by State. For example, the lowest Queensland hunter estimate was 24,745 pig hunters. We applied the competition participation

rate of 21.73 per cent to 24,745 to get 5377 and multiplied that by the average catch of 17.06. Multiplied that by 12 (months) and came up with 1,100,799.44

The inferred figures are meant to be indicative and more sophisticated methodology in future exercises might produce differing results. However, we are confident our numbers are low rather than high. We suspect the activity rate of hunters is much higher but we have followed the figures produced by the hunt to provide a starting point (in the absence of any other modelling). Also Keeping Count is a document we produced and needs further independent evaluation to determine its worth. We do not know if variations from month to month are seasonal, work related or indicative of waxing and waning enthusiasm for the competition based on publicity or 'comp fatigue'. Our objective is to run more competitions in the future to allow comparison at a month on month level to see what this might show us.

(A copy of Keeping Count is with Associate Professor Allen to critique our methodology and assumptions etc with a view to developing a sustainable base with which to analyse relevant data into the future. He has described it as "a pretty thorough attempt at counting how many pig hunters there are and how many pigs they kill". He said "what you've done seems like the best anyone could do" notwithstanding the innate 'rubberyness' of some figures.)

We now have 12 months of activity but we remain too suspicious of our inexperience in this space to suggest any trend is proof of anything concrete. Our best hope is to have all figures analysed after the event by suitably qualified people who can use that as a base against which to compare future endeavours. Despite our caution we do think the numbers are indicative if not exact. We note the activity rate and/or average catches each month can move around a great deal due to a number of, as yet, unidentified factors. Indeed, the 12 months of data show variation each month in all areas. We don't know whether these variations will prove to be significant in the long term.

We include the inferred estimates here to display the thinking behind our process and ask you to look for the flaws in our approach so we can consider changes in methodology going forward.

WHY LOCAL GOVERNMENT AREA AND NOT SPECIFIC LOCATIONS OF CATCHES?

This one is a no brainer when dealing with hunters. None of them will detail hunting spots because it poses a risk of encouraging illegal hunting in that area and it risks damaging the trust-based relationship with their landholder. Hunters are guests on any land and, as such, we well understand the need for information security in relation to personal and business activity on that land. Associate Professor Allen has confirmed local government area or, indeed, nearest town is adequate for analysis purposes of data collected on this scale. We are open to using the FeralScan system if landholders approve of that detail of information being passed on and we have sought guidance from representative groups including NSW Farmers. Talks re FeralScan have indicated there is no budget to help promote the concept to landholders or hunters.

WHY DID WE INCLUDE QUESTIONS OF APPARENT BREEDING STATUS OF PIGS?

Critics of hunting often suggest hunters only target big male pigs. We knew that not to be the case from many decades hunting and dealing with hunters and assume the belief is based on the weight of photos of pigs published and hunting discussion being heavily in favour of big boars. Our contention has been that has just been a function of what gets pig hunters most talkative. We wanted to know what the gender mix looked like based on unweighted returns from hunters. (Again, there was no advantage for hunters to focus on boars to win prizes.)

The resultant figures showed a definite bias toward boars over sows and a heavy bias towards pigs of breeding the age. Boars made up 56.84% of all pigs caught, shot or trapped. Sows were 43.14% of reported pigs. So five or six boars for every four or five sows...

The variation isn't great but when viewed with the percentage of breeding age pigs taken, it shows the greatest bias toward breeders of either gender. Why is that the case? Of course, we can't offer a definitive answer but there are some salient points to consider based on the combined experience of the research team.

- Pigs reach sexual maturity very early. It tends to be more a function of feed quality rather than age.
- Sexually mature pigs are bigger and therefore easier to spot to shoot or are more readily seen or scented by dogs.
- Some dogs select the biggest pigs available.
- Some shooters select the biggest pigs because they present the clearer site picture for a more effective shot.
- Sexually mature boars are very strong smelling and much easier to locate using dogs.
- Sexually mature boars often abandon mobs to take their own escape route and therefore present a more obvious, single target.

Trapping balances things out somewhat because it tends to work best on naïve pigs and that will include younger or less experienced pigs.

Whatever method is used to kill pigs, a percentage of the pigs will learn or develop strategies to abate the threat. Sows, in particular, will educate their mobs about threats. Boars will tend to just look after themselves.

2024	
Pig hunt total	28,581
Male	56.84% of all pigs
Males of breeding age	85.18% of all males
Female	43.14% of all pigs
Females of breeding age	84.72% of all females

WHAT IS THE ECONOMIC IMPACT OF THIS HUNTING ACTIVITY?

The Economic contribution of recreational hunting in NSW report published for the NSW DPI in May 2023 (RM Consulting Group Pty Ltd) found pig hunters using dogs were twice as active as other hunters, hunting on average twice as often as shooters and bow hunters.²

Further, the report found pig hunters surveyed spent an average of \$917 per trip with standing annual costs of \$2151³.

In an attempt to develop an 'apples and apples' comparison we annualised trip costs by multiplying \$917 by the 11.2 trips per year, then divided by 12 to give us a notional monthly budget \$855.87. Add to that the standing costs per year of \$2151 divided by 12 (\$179.25) and we get a total average monthly expenditure of \$1035.12.

Our 2024 hunt data results show an active cohort of hunters of 21.73 per cent. That percentage applied to the Keeping Count hunter number estimates and then multiplied by the total 12 monthly cost of each hunter therefore suggests an economic boost of \$326,882,615 in the (mostly regional) Australian economy for 2024. This gives the estimated pigs caught in the 2024 (5,387,412) an average cost of \$60.67.

Sources

¹ *Keeping Count, How many hunters are there? Ned Makim | APDHA Research Unit | July 2022*

² *Economic contribution of recreational hunting in NSW, May 2023, P25* RM Consulting Group Pty Ltd trading as RMCG 135 Mollison Street, Bendigo Victoria 3550

³ *Economic contribution of recreational hunting in NSW, May 2023, P26* RM Consulting Group Pty Ltd trading as RMCG 135 Mollison Street, Bendigo Victoria 3550

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