
Department of Primary Industries
and Regional Development

NSW 2023 Animal Use in Research Statistics

December 2024



Contents

1. Introduction	3
2. Animal use data	4
3. Fate of domestic cats and dogs	19
4. Domestic cats and dogs kept for research	20
5. Lethality testing	21

18667 12/24

Published by the Department of Primary Industries and Regional Development

Title: NSW 2023 Animal Use in Research Statistics

Department reference number: RDOC24/198426

© State of New South Wales through Department of Primary Industries and Regional Development 2024. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute the Department of Primary Industries and Regional Development as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (December 2024) and may not be accurate, current or complete. The State of New South Wales (including Department of Primary Industries and Regional Development), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.

Images: pg1 ©iStockphoto.com/kazakovmaksim ; pg3 ©iStockphoto.com/Auldist; pg4 © NSW DPIRD Image library; pg19 ©iStockphoto.com/dima_sidelnikov; pg20 ©iStockphoto.com/uzhursky; pg21 ©iStockphoto.com/unol; and pg22 ©iStockphoto.com/tiripero

1. Introduction

In NSW, information on the use of animals in research is collected by accredited research establishments on a calendar year basis. It is a requirement under the *Animal Research Act 1985* that this information is submitted to the NSW Department of Primary Industries and Regional Development (the department) by 31 March of the following year.. The information is then collated and published in the annual NSW Animal Use in Research Statistics reports.

The following is included in this 2023 report:

- Animal use data: These data show animal use in research in NSW since 2019. For data for prior years, see previous [NSW Animal Use in Research Statistics reports](#). The purpose tables show the number of times animals were used for each purpose, in species groups, for each of the nine procedure categories.
- Fate of animals data: Includes mandatory reporting data on the fate of all domestic cats and dogs used for research.
- Cat and dog rehoming data: Includes the first year of data collected by the department in response to the commencement of the *Animal Research Amendment (Right to Release) Act 2022*.
- Lethality testing data: The *Animal Research Act 1985* defines a lethality test as “an animal research procedure in which any material or substance is administered to animals for the purpose of determining whether any animals will die or how many animals will die”.

Guidance on reporting categories of purpose, procedure, species and fate is available at [Animal Ethics Infolink: Guide to reporting categories](#).

Collation and reporting of data by the department are reliant on the information provided by accredited research establishments. The accuracy of the information supplied is the responsibility of the reporting establishment.

Data presented in this report are quantitative in nature. Accredited research establishments also report qualitative data annually to the department on the 3Rs: replacement, reduction and refinement. The principles of the 3Rs are accepted internationally and provide a framework for ethical decision making in the use of animals in research and teaching. The Animal Research Review Panel reviewed the 2023 3Rs qualitative data that was reported to the department by accredited research establishments. The Animal Research Review Panel provided individual feedback to the establishments on these reports. For further information on the 3Rs see [Animal Ethics Infolink: 3Rs](#).



2. Animal use data

Animals are counted for each year in which they are used. This means, for example, that animals in a project that runs for a period of more than one calendar year will be counted again for each year in which they are used. Therefore, a year-to-year comparison of animal numbers includes individual animals that may be the same across two or more years.

Animals are counted in each project in which they are used in a reporting year. This means the same animal will be counted more than once if they are used in more than one project. This method likely results in animal use numbers that are greater than the number of individual animals involved. This reporting is consistent with reporting in other Australian jurisdictions.

Animals that are kept at accredited research establishments, but not used in a research project in a reporting year, will not be included in statistics reported for that year.

Guidance on reporting categories of purpose, procedure, species and fate is available at [Animal Ethics Infolink: Guide to reporting categories](#).



2.1 Number of times animals were used 2019–2024 by species group

The total number of times animals were used increased from 2,381,800 in 2022 to 5,752,214 in 2023 (a difference of 3,370,414). The primary contributors to this were an increase in use of fish by 3,052,699 and increase in use of birds by 366,620.

97% of reported times fish were used in 2023 were categorised as lower impact procedures ‘Observation involving minor interference’ (P1) or ‘Minor conscious intervention’ (P3). An example of a typical P3 procedure for fish is observation and tagging.

80% of reported times birds were used in 2023 were categorised as lower impact procedures ‘Observation involving minor interference’ (P1).

Figure 2.1

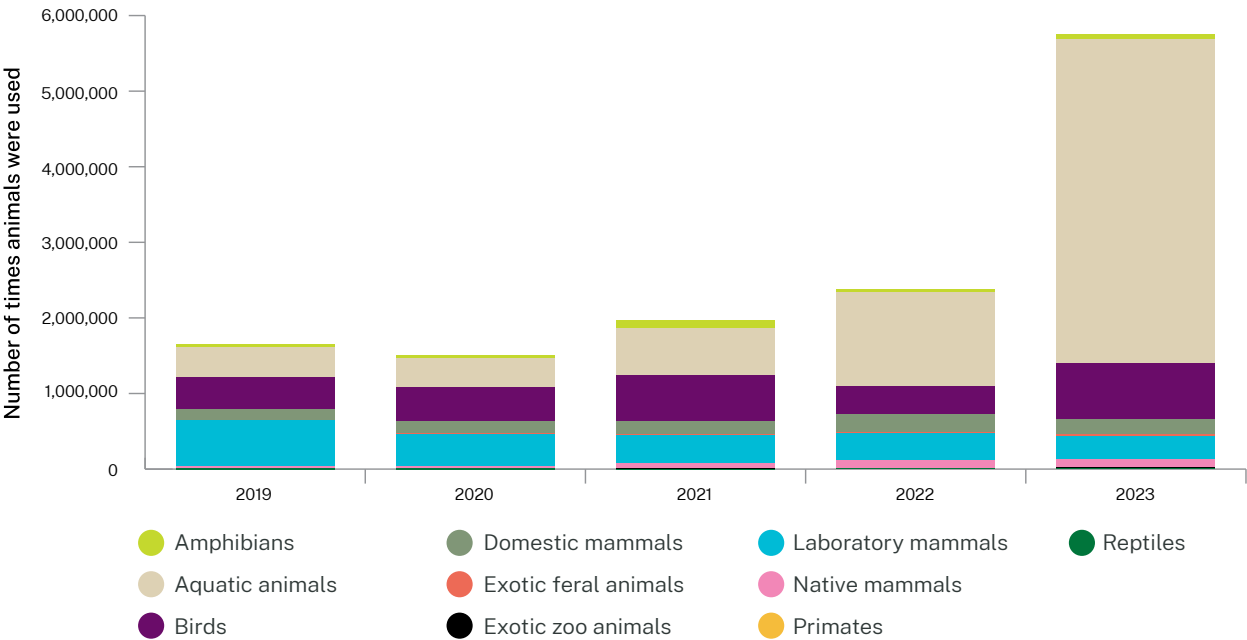


Table 2.1

Species group	2019	2020	2021	2022	2023
Amphibians	28,413	30,814	103,430	35,172	53,494
Aquatic animals	397,139	393,127	631,196	1,244,503	4,296,109
Birds	430,573	441,729	605,293	367,777	734,397
Domestic mammals	133,515	161,886	167,318	236,118	200,405
Exotic feral mammals	1,960	10,463	12,202	13,414	24,946
Exotic zoo animals	140	66	74	61	71
Laboratory mammals	616,812	424,170	377,838	368,735	302,403
Native mammals	26,954	31,164	65,645	95,049	116,316
Primates	53	217	162	188	24
Reptiles	14,749	14,756	14,117	20,783	24,049
Total	1,650,308	1,508,392	1,977,275	2,381,800	5,752,214



Guide to species categories

2.2 Number of times animals were used 2019–2024 by research purpose

Figure 2.2

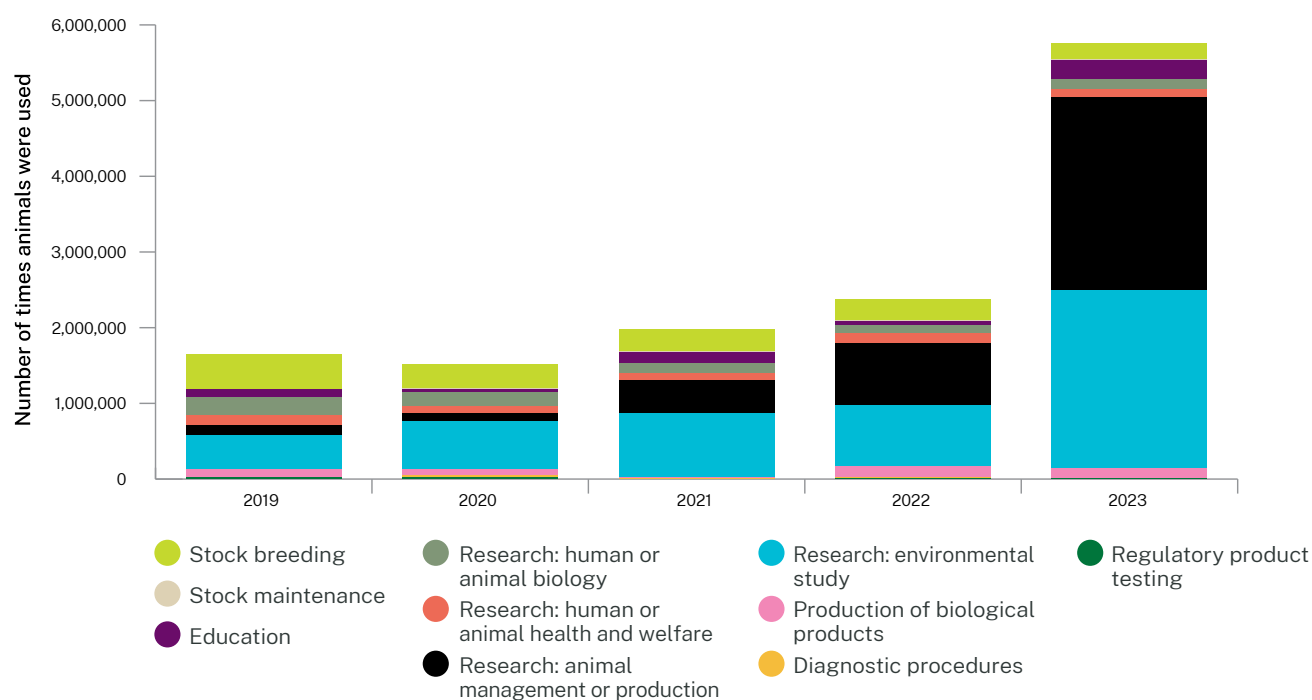


Table 2.2

Purpose	2019	2020	2021	2022	2023
Stock breeding	452,258	304,654	286,602	277,166	203,668
Stock maintenance	5,875	9,899	7,936	18,026	2,652
Education	105,110	43,484	142,170	44,480	256,651
Research: human or animal biology	239,190	183,227	139,996	108,866	128,564
Research: human or animal health and welfare	129,577	84,271	90,289	126,666	116,106
Research: animal management or production	133,914	115,593	429,291	821,826	2,536,863
Research: environmental study	448,737	631,072	847,344	805,361	2,363,689
Production of biological products	99,497	77,486	18,579	151,704	126,204
Diagnostic procedures	2,959	24,415	3,884	1,486	5,986
Regulatory product testing	33,191	34,291	11,184	26,219	11,831
Total	1,650,308	1,508,392	1,977,275	2,381,800	5,752,214

 [Guide to purpose categories](#)

2.3 Number of times animals were used 2019–2024 by research procedure

Figure 2.3

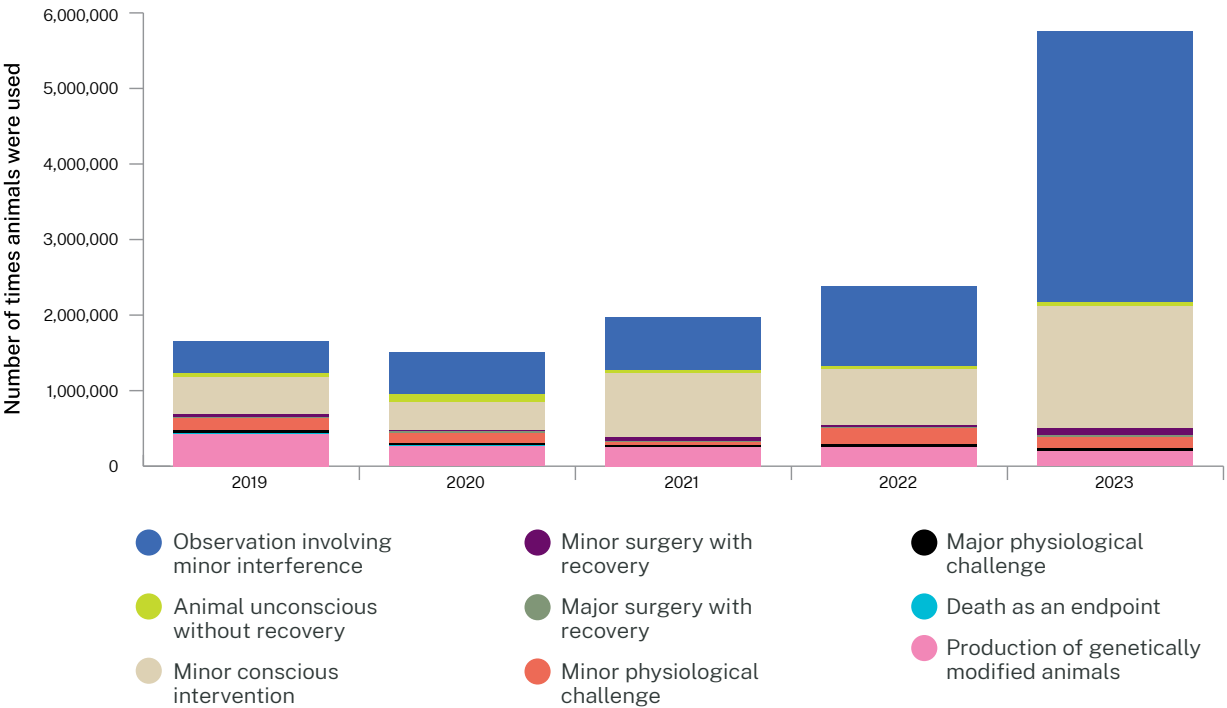


Table 2.3

Procedure	2019	2020	2021	2022	2023
Observation involving minor interference	417,598	549,697	698,542	1,050,742	3,580,910
Animal unconscious without recovery	46,055	111,551	49,172	49,330	39,788
Minor conscious intervention	497,414	362,254	834,944	730,814	1,626,241
Minor surgery with recovery	30,312	18,112	59,736	25,862	92,379
Major surgery with recovery	17,092	16,269	12,377	13,169	16,119
Minor physiological challenge	162,130	134,486	41,741	222,617	154,211
Major physiological challenge	37,880	31,237	20,844	28,805	30,873
Death as an endpoint	15,525	10,926	5,443	6,549	7,857
Production of genetically modified animals	426,302	273,860	254,476	253,912	203,836
Total	1,650,308	1,508,392	1,977,275	2,381,800	5,752,214

 [Guide to procedure categories](#)

2.4 Number of times animals were used 2019–2024 by research procedure excluding ‘Observation involving minor interference’

Information provided by accredited research establishments each year includes the collection of data on animals used in the procedure category of P1: “Observation Involving Minor Interference”.

The guidance for inclusion of animals in this procedure category is: “Animals are not interacted with or, where there is interaction, it would not be expected to compromise the animal’s welfare any more than normal handling, feeding, etc. There is no pain or suffering involved.”

This category of procedure use potentially includes large numbers of animals. For example, it includes the observation of free-living animals, for instance where an aerial survey of birds could record thousands of animals. The below data hence excludes this procedure category.

Figure 2.4

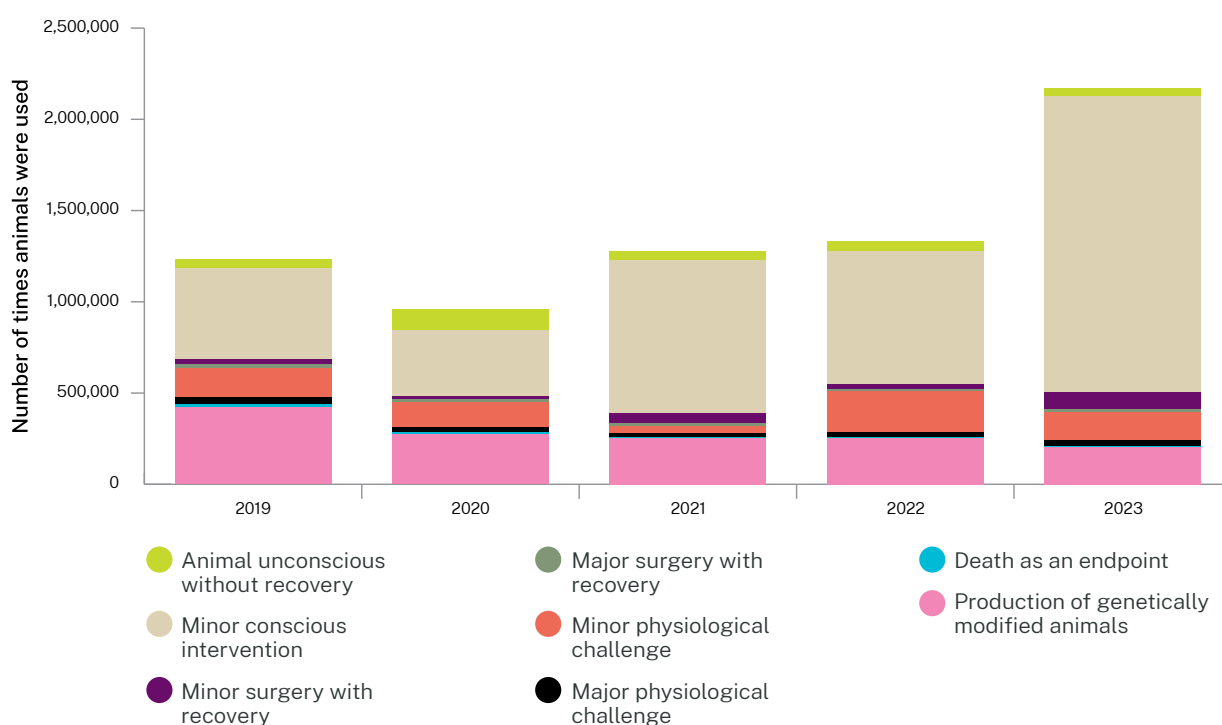


Table 2.4

Procedure	2019	2020	2021	2022	2023
Animal unconscious without recovery	46,055	111,551	49,172	49,330	39,788
Minor conscious intervention	497,414	362,254	834,944	730,814	1,626,241
Minor surgery with recovery	30,312	18,112	59,736	25,862	92,379
Major surgery with recovery	17,092	16,269	12,377	13,169	16,119
Minor physiological challenge	162,130	134,486	41,741	222,617	154,211
Major physiological challenge	37,880	31,237	20,844	28,805	30,873
Death as an endpoint	15,525	10,926	5,443	6,549	7,857
Production of genetically modified animals	426,302	273,860	254,476	253,912	203,836
Total	1,232,710	958,695	1,278,733	1,331,058	2,171,304

2.5 Number of times animals were used in 2023 by purpose and procedure

Table 2.5

Procedure	Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Death as an endpoint	Production of genetically modified animals	Total
Stock breeding	16,303	407	2,824			119			184,015	203,668
Stock maintenance	578	166	278	14	9				1,607	2,652
Education	235,571	2,060	17,512	1,153	19	271	65			256,651
Research: human or animal biology	40,550	8,077	16,664	10,561	7,826	13,730	22,604		8,552	128,564
Research: human or animal health and welfare	66,003	2,862	19,411	2,832	2,647	7,422	5,267		9,662	116,106
Research: animal management or production	2,462,460	2,323	62,539	2,132	16	4,725	2,668			2,536,863
Research: environmental study	754,767	23,441	1,499,719	75,493	5,602	4,184	192	291		2,363,689
Production of biological products	448		3,414	137		122,179	26			126,204
Diagnostic procedures	4,022	452	1,451	7		3	51			5,986
Regulatory product testing	208		2,429	50		1,578		7,566		11,831
Total	3,580,910	39,788	1,626,241	92,379	16,119	154,211	30,873	7,857	203,836	5,752,214

2.6 Number of times animals were used in 2023 by species group for purpose: Stock breeding

Table 2.6

Procedure	Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor physiological challenge	Production of genetically modified animals	Total
Amphibians	Total	454				454
	Amphibians	454				454
Aquatic animals	Total	364		151	119	22,025
	Fish	364		151	119	22,025
Domestic mammals	Total	644				644
	Pigs	644				644
Laboratory mammals	Total	14,423	407	2,673		180,127
	Guinea pigs	277			162,624	277
	Mice	4,669	67	2,658	160,409	167,803
	Rabbits	86				86
	Rats	9,391	340	15	2,215	11,961
Reptiles	Total	418				418
	Turtles and tortoises	418				418
Total		16,303	407	2,824	119	203,668

2.7 Number of times animals were used in 2023 by species group for purpose: Stock maintenance

Table 2.7

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Production of genetically modified animals	Total
Amphibians	Total	8						8
	Amphibians	8						8
Birds	Total	252						252
	Poultry	252						252
Domestic mammals	Total	19		64				83
	Cattle	19						19
	Dogs			31				31
	Sheep			33				33
Laboratory mammals	Total	177	166	214	14	9	1,607	2,187
	Mice	75	166	158		9	1,607	2,015
	Rabbits			56				56
	Rats	102			14			116
Reptiles	Total	122						122
	Lizards	122						122
Total		578	166	278	14	9	1,607	2,652

2.8 Number of times animals were used in 2023 by species group for purpose: Education

Table 2.8

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Total
Amphibians	Total	52	465	29					546
	Amphibians	52	465	29					546
Aquatic animals	Total	752	403	455	273				1,883
	Crustaceans (reporting not mandatory)	15							15
	Fish	737	403	455	273				1,868

Table 2.8 continued

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Total
Birds	Total	224,146	538	576	95		200	65	225,620
	Exotic captive			4					4
	Exotic wild	29			95				124
	Native captive	105		8					113
	Native wild	33,407							33,407
	Other birds	30							30
	Poultry	190,575	538	564			200	65	191,942
Domestic mammals	Total	6,863	128	13,815	435	19	52		21,312
	Cats	246		25					271
	Cattle	2,800		2,754	30	11			5,595
	Dogs	232		738					970
	Goats	3		1					4
	Horses	299		349	267		8		923
	Other domestic mammals	4		4					8
	Pigs	37	55	978			10		1,080
	Sheep	3,242	73	8,966	138	8	34		12,461
Exotic feral mammals	Total	318		266	1				585
	Cats	5							5
	Foxes	21							21
	Mice	3		263					266
	Pigs				1				1
	Rabbits	1							1
	Rats	288		3					291
Exotic zoo animals	Total	51							51
	Exotic zoo animals	51							51
Laboratory mammals	Total	241	526	1,509	90		19		2,385
	Guinea pigs	58	7	10					75
	Mice	66	305	1,310	37		19		1,737
	Rabbits	64		13					77
	Rats	53	214	176	53				496
Native mammals	Total	2,678		241	178				3,097
Reptiles	Total	470		621	81				1,172
	Lizards	282		601	81				964
	Snakes	169		20					189
	Turtles and tortoises	19							19
Total		235,571	2,060	17,512	1,153	19	271	65	256,651

2.9 Number of times animals were used in 2023 by species group for purpose: Research – human or animal biology

Table 2.9

Procedure	Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Production of genetically modified animals	Total
Amphibians	Total		151		29	85	1,996		2,261
	Amphibians		151		29	85	1,996		2,261
Aquatic animals	Total	3,605	1,262	2,971	108	180	1,561	11	6,200
	Cephalopods (reporting not mandatory)						11		11
	Crustaceans (reporting not mandatory)		624	111					735
	Fish	3,605	638	2,860	108	180	1,561		6,200
Birds	Total	8,606	441	1,672					10,719
	Exotic wild		120	151					271
	Native captive	641	163	176					980
	Native wild	7,965		1,305					9,270
	Poultry		158	40					198
Domestic mammals	Total	91	2	204	12	149			458
	Cats			21					21
	Cattle	3		41					44
	Dogs			119					119
	Horses	30		1					31
	Pigs	32	2		9	44			87
	Sheep	26		22	3	105			156
Exotic feral mammals	Total	8		94					102
	Cats	6							6
	Foxes	2							2
	Mice			2					2
	Rats			92					92
Laboratory mammals	Total	1,956	6,252	10,179	10,407	7,465	12,061	19,875	2,352
	Guinea pigs		29						29
	Mice	1,428	2,837	8,649	6,204	4,788	11,188	19,752	2,352
	Rabbits		8	16		163			187
	Rats	528	3,378	1,514	4,203	2,514	873	123	13,133
Native mammals	Total	26,210	2	302	34		23	331	26,902
Primates	Total					3			3
	Baboons					3			3
Reptiles	Total	74	118	1,091				391	1,674
	Lizards	74	118	1,040				388	1,620
	Snakes			31				3	34
	Turtles and tortoises			20					20
Total		40,550	8,077	16,664	10,561	7,826	13,730	22,604	8,552

2.10 Number of times animals were used in 2023 by species group for purpose: Research — human or animal health and welfare

Table 2.10

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Production of genetically modified animals	Total
Amphibians	Total	104		44		29		250		427
	Amphibians	104		44		29		250		427
Aquatic animals	Total	2,040	6	349						2,395
	Fish	2,040	6	349						2,395
Birds	Total	2,176		221	15		406	351		3,169
	Native captive				15					15
	Native wild	2,176		5						2,181
	Poultry			216			406	351		973
Domestic mammals	Total	52,622	35	14,903	119	157	407	6		68,249
	Cats	210		289	45					544
	Cattle	14,636		5,175			12			19,823
	Dogs	182		419	59	51	24			735
	Horses	1,579		901		4				2,484
	Other domestic mammals			11						11
	Pigs	32,404	32	4,397		85				36,918
	Sheep	3,611	3	3,711	15	17	371	6		7,734
Exotic feral mammals	Total	618		501						1,119
	Cats	23								23
	Dingo/wild dogs	1								1
	Foxes	11								11
	Horses	462								462
	Mice	1		2						3
	Other exotic feral mammals	15		391						406
	Pigs			21						21
Exotic zoo animals	Rats	105		87						192
	Total	2		13						15
	Exotic zoo animals	2		13						15
Laboratory mammals	Total	6,926	2,821	1,945	2,220	2,461	6,609	4,660	9,662	37,304
	Guinea pigs		291	43	4		48	96		482
	Mice	6,890	2,447	1,828	2,054	2,204	6,454	3,763	9,662	35,302
	Rabbits						107			107
	Rats	36	83	74	162	257		801		1,413
Native mammals	Total	1,466		323	478					2,267

Table 2.10 continued

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Production of genetically modified animals	Total
Primates	Total			10						10
	Other primates			10						10
Reptiles	Total	49		1,102						1,151
	Lizards	48		1,071						1,119
	Snakes	1								1
	Turtles and tortoises			31						31
Total		66,003	2,862	19,411	2,832	2,647	7,422	5,267	9,662	116,106

2.11 Number of times animals were used in 2023 by species group for purpose: Research – animal management or production

Table 2.11

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Total
Amphibians	Total	478						478	
	Amphibians	478						478	
Aquatic animals	Total	2,413,720			380		1,900	220	2,416,220
	Fish	2,413,720			380		1,900	220	2,416,220
Birds	Total	6,162	2,106	7,327			192	2,448	18,235
	Native captive	218							218
	Native wild			5					5
	Poultry	5,944	2,106	7,322			192	2,448	18,012
Domestic mammals	Total	41,958	6	54,533	1,375		2,633		100,505
	Cats	37		112					149
	Cattle	20,742		13,569			480		34,791
	Dogs	53							53
	Goats	778		600					1,378
	Horses	47		26					73
	Pigs	16,487		20,443					36,930
	Sheep	3,814	6	19,783	1,375		2,153		27,131
Exotic feral mammals	Total	12		120					132
	Foxes	12							12
	Horses			120					120
Laboratory mammals	Total	608	211	19	189	16			1,043
	Mice	608	211	19	189	16			1,043
Native mammals	Total			62	188				250
Total		2,462,460	2,323	62,539	2,132	16	4,725	2,668	2,536,863

2.12 Number of times animals were used in 2023 by species group for purpose: Research – environmental study

Table 2.12

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Death as an endpoint	Total
Amphibians	Total	41,492		7,784			34			49,310
	Amphibians	41,492		7,784			34			49,310
Aquatic animals	Total	266,356	22,834	1,459,626	75,085	5,596	4,150	192	7	1,833,846
	Cephalopods (reporting not mandatory)	37		2,564						2,601
	Crustaceans (reporting not mandatory)	1,776	3,523	277	3,261					8,837
	Fish	264,543	19,311	1,456,785	71,824	5,596	4,150	192	7	1,822,408
Birds	Total	347,543	20	6,439	20					354,022
	Exotic captive	1								1
	Exotic wild	3,688	20	77						3,785
	Native captive	44			15					59
	Native wild	331,705		6,164	5					337,874
	Other birds	12,103		3						12,106
	Poultry	2		195						197
	Total	467		69						536
Domestic mammals	Cattle	124		67						191
	Deer	304								304
	Dogs	32		2						34
	Horses	6								6
	Sheep	1								1
	Total	21,400		1,445	11				152	23,008
Exotic feral mammals	Cats	914		7	8				138	1,067
	Cattle	17								17
	Dingo/wild dogs	356		3						359
	Foxes	2,476			3					2,479
	Goats	1,713							12	1,725
	Hares	824		13						837
	Horses	33								33
	Mice	852		1,156						2,008
	Other exotic feral mammals	1,355		76					2	1,433
	Pigs	8,523		66						8,589
	Rabbits	633								633
	Rats	3,704		124						3,828

Table 2.12 continued

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Major surgery with recovery	Minor physiological challenge	Major physiological challenge	Death as an endpoint	Total
Laboratory mammals	Total	9								9
	Mice	9								9
Native mammals	Total	69,186	350	13,754	342	4				83,636
Primates	Total	11								11
	Marmosets	8								8
	Other primates	3								3
Reptiles	Total	8,303	237	10,602	35	2			132	19,311
	Lizards	3,381	237	3,934						7,552
	Snakes	234		148						382
	Turtles and tortoises	4,688		6,520	35	2			132	11,377
Total		754,767	23,441	1,499,719	75,493	5,602	4,184	192	291	2,363,689

2.13 Number of times animals were used in 2023 by species group for purpose: Production of biological products

Table 2.13

Procedure		Observation involving Minor interference	Minor conscious intervention	Minor surgery with Recovery	Minor physiological challenge	Major physiological challenge	Total
Amphibians	Total	10					10
	Amphibians	10					10
Birds	Total	220	78		121,442		121,740
	Native captive		12				12
	Native wild	220					220
	Poultry		66		121,442		121,508
Domestic mammals	Total	35	3,158	33	737		3,963
	Cats	12	33	1	8		54
	Cattle		33	20	202		255
	Dogs	16	66		132		214
	Horses		1		320		321
	Sheep	7	3,025	12	75		3,119
Laboratory mammals	Total			104		26	130
	Rabbits					26	26
	Rats			104			104
Native mammals	Total	160					160
Reptiles	Total	23	178				201
	Lizards	22					22
	Snakes	1	178				179
Total		448	3,414	137	122,179	26	126,204

2.14 Number of times animals were used in 2023 by species group for purpose: Diagnostic procedures

Table 2.14

Procedure		Observation involving minor interference	Animal unconscious without recovery	Minor conscious intervention	Minor surgery with recovery	Minor physiological challenge	Major physiological challenge	Total
Aquatic animals	Total	3,840	2					3,842
	Fish	3,840	2					3,842
Birds	Total		380		1		27	408
	Native captive				1			1
	Poultry		380				27	407
Domestic mammals	Total	177		1,343	2			1,522
	Cats	54						54
	Cattle	100		1,277				1,377
	Dogs	23		32	2			57
	Sheep			34				34
Exotic zoo animals	Total	5						5
	Exotic zoo animals	5						5
Laboratory mammals	Total		70	108		3	24	205
	Mice		62	104			24	190
	Rabbits		8					8
	Rats			4		3		7
Native mammals	Total				4			4
Total		4,022	452	1,451	7	3	51	5,986

2.15 Number of times animals were used in 2023 by species group for purpose: Regulatory product testing

Table 2.15

Procedure		Observation involving minor interference	Minor conscious intervention	Minor surgery with recovery	Minor physiological challenge	Death as an endpoint	Total
Birds	Total	192			40		232
	Exotic captive				40		40
	Poultry	192					192
Domestic mammals	Total	16	1,525	50	1,538	4	3,133
	Cats		16	18	17		51
	Cattle	16	537	20	284		857
	Dogs		71	12	65		148
	Horses				30		30
	Pigs		311			4	315
	Sheep		590		1,142		1,732
	Total		904			7,562	8,466
Laboratory mammals	Guinea pigs		5				5
	Mice		114			7,562	7,676
	Rabbits		545				545
	Rats		240				240
	Total	208	2,429	50	1,578	7,566	11,831

3. Fate of domestic cats and dogs

From the 2019 reporting year onwards, reporting on the fate of animals has been mandatory for the use of domestic dogs and cats, and voluntary for other animals.

Fate is reported for each year in which an animal is used in a research project, which means that:

- if an animal is not used in a research project in a reporting year, its fate is not counted for that year
- if an animal is used in multiple reporting years, its fate is counted in those additional years

Fate is reported for animals in each project in which they are used. This means that if an animal is used in multiple projects within the same reporting year, its fate may be counted multiple times for that year.

The above factors mean that the resulting number of animal fates reported for cats and dogs in 2023 in this section of the report is greater than the number of individual cats and dogs reported to be kept for research in 2023 in section 4 below.



 [Guide to fate categories](#)

Table 3.1 Fate of domestic cats 2020–2023

Year	2019	2020	2021	2022	2023
Fate of cats					
Number of times cats were used					
Retained in project	134	190	76	140	199
Retained for use in other projects or supplied to another establishment or individual for research	506	271	202	252	227
Retired from research and kept by the establishment or individual		11			67
Privately (non-research) owned and remained with owner	864	332	554	1,294	621
Rehomed (as companion animal to private (non-research) home or rehoming organisation)		75	7	112	23
Euthanased or died related to the project					
Euthanased or died unrelated to the project		5	2	5	1
Euthanased because unsuitable to be rehomed				2	
Euthanased because unable to find a suitable home					
Remain free living in the wild or released to the wild			3		6
Total	1,504	884	844	1,805	1,144

Table 3.2 Fate of domestic dogs 2020–2023

Year	2019	2020	2021	2022	2023
Fate of dogs					
Number of times dogs were used					
Retained in project	190	392	234	360	286
Retained for use in other projects or supplied to another establishment or individual for research	662	565	652	738	601
Retired from research and kept by the establishment or individual		12			
Privately (non-research) owned and remained with owner	2,729	1,575	1,153	1,759	1,427
Rehomed (as companion animal to private (non-research) home or rehoming organisation)	30		16	27	31
Euthanased or died related to the project					
Euthanased or died unrelated to the project	5	9	9	4	9
Euthanased because unsuitable to be rehomed					
Euthanased because unable to find a suitable home					
Remain free living in the wild or released to the wild					7
Total	3,616	2,553	2,064	2,888	2,361

4. Domestic cats and dogs kept for research

The *Animal Research Amendment (Right to Release) Act 2022* commenced in November 2022 and included additional annual reporting requirements regarding rehoming of domestic cats and dogs. This 2023 report contains the first year of data collected by the department in response to the commencement of the *Animal Research Amendment (Right to Release) Act 2022*.

The department previously conducted a survey on domestic cats and dog kept for research in reporting years 2019–2022. See section 5 of the [2022 Animal Use in Research Statistics report](#) for further information and discussion of the survey outcomes.



Table 4.1 Cats and dogs kept for research 2023

This table provides data on individual cats and dogs *kept* by establishments for research in 2023. These animals were not all necessarily used for research in 2023. This contrasts with Tables 3.1 and 3.2 above that provide data according to the number of times animals were *used* in a research project in 2023 (and exclude animals that were not used).

	Number of cats	Number of dogs
Kept on 1 January	220	442
Kept on 31 December	227	456
Born at the establishment	8	57
Obtained from outside the establishment	47	19
Supplied to another establishment for use in research	1	9
Rehomed	42	43
Unable to be rehomed after they either ceased to be used for research or had been kept for a total of three years	0	1
Euthanased		
Total	3	6
Euthanased because they were unable to be rehomed	0	0
Euthanased because they were certified as unsuitable for rehoming	0	0
Euthanased for another reason	3	6
Died (not euthanased)	2	4
Certified as unsuitable for rehoming	0	0

5. Lethality testing

The *Animal Research Act 1985* defines a lethality test as “an animal research procedure in which any material or substance is administered to animals for the purpose of determining whether any animals will die or how many animals will die”. Lethality tests include, but are not limited to, LD50 tests.

The following lethality testing cases were reported in 2023.



5.1 Mice

Number used: 5022

Number died (not euthanased): 1301

Number euthanased as early endpoint: 370

Procedure: Susceptible animals are challenged with test toxin/antibody dilutions to determine antibody titre.

Justification: Regulatory testing required to demonstrate efficacy (potency) of vaccines prior to release. Testing of stability batches and new product formulations.

Alternatives: A project is currently in place with the objective of replacing animal tests with in vitro tests.

5.2 Mice

Number used: 1694

Number died (not euthanased): 856

Number euthanased as early endpoint: 149

Procedure: Susceptible animals are challenged with test antigen/toxin/antibody dilutions to determine potency of antigen preparations.

Justification: In-process testing of vaccine constituents to allow evaluation of suitability for further manufacture.

Alternatives: The establishment is developing the use of an alternative assay to quantify toxoid and toxin.

5.3 Mice

Number used: 966

Number died (not euthanased): 283

Number euthanased as early endpoint: 28

Procedure: Susceptible animals are challenged with test toxin to determine potency of antigen preparation.

Justification: This test is based upon regulatory requirements for the assessment of in-process products.

Alternatives: There are no alternatives available at this time however the establishment has embarked on a long-term program to develop in vitro assays which may be used to replace existing in vivo assays subject to regulatory approval of these replacement assays.

5.4 Feral deer and feral goats

Number used: 208 (feral deer); 142 (feral goats)

Number died (not euthanased): 2 (feral deer); 12 (feral goats)

Number euthanased as early endpoint: 0 (feral deer); 0 (feral goats)

Procedure: Field trials using a targeted feeding structure and non-lethal or lethal bait types.

Justification: Ongoing field trials continue to identify the potential for further development of a target-selective, humane and cost-efficient method as an additional technique for controlling overabundant herbivore pest species.

Alternatives: The purpose of this research is to devise a humane method for killing free-living feral species. There are no alternatives to lethality testing.

5.5 Pigs

Number used: 4

Number died (not euthanased): 2

Number euthanased as early endpoint: 0

Procedure: This is a small-scale trial into a method of euthanasia for pigs via a compound in their feed.

Justification: If successful, this technique could be used under veterinary supervision to humanely, and with minimal intrusion, euthanase mature sows

and boars on farm. This would reduce the welfare risk to large breeder pigs that can be difficult to successfully and humanely restrain and euthanase via a single captive bolt shot.

The animals used in this trial would otherwise be culled by commercially standard methods.

Alternatives: There is no other method to replace the need for this testing.



