Statistics of animal use in research and teaching, Victoria

1 January 2015 to 31 December 2015

Report number 33



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# Introduction

The Secretary of the Department of Economic Development, Jobs, Transport & Resources receives annual summary data from all licence holders using animals in research and teaching in Victoria under the *Prevention of Cruelty to Animals Act 1986* (the Act). An ‘Animal Use Return’ form must be submitted annually for each project using animals, in accordance with Regulation 100 of the Prevention of Cruelty to Animals Regulations 2008. This report aggregates the animal use returns to provide a picture of the animals used in Victoria for research and teaching 1 January–31 December 2015. Each project involving animal use must be approved by an Animal Ethics Committee.

Tables 1–12 provide data on animals used in scientific procedures. Table 13 provides data on ‘specified animals’ that were produced for scientific procedures but not used, or not yet used by 31 December. A specified animal is a guinea pig, or a rat, mouse or rabbit that is not bred in its native habitat, or a non-human primate. Their breeding must be licensed under Part 3 of the Act.

Further information on the data collected for this report may be found in the 2015 return guidelines, available at [www.agriculture.vic.gov.au/ART](http://www.agriculture.vic.gov.au/ART).

# Table 1: Number of animals used, by type of animal and project purpose, 2015

| **Animal Type** | **Project purpose** | | | | | **Total** |
| --- | --- | --- | --- | --- | --- | --- |
| **Animal management/ production** | **Educational** | **Environmental** | **Human/animal biology** | **Human/animal health/welfare** |
| Amphibians |  | **538** | **511** | **5127** | **15** | **6191** |
| Birds (exotic captive) |  |  |  | 29 |  | **29** |
| Birds (exotic wild) |  | 734 | 274 | 100 |  | **1108** |
| Birds (native captive) | 106 | 196 |  | 897 | 44 | **1243** |
| Birds (native wild) |  | 13 437 | 67 274 | 2561 | 1072 | **84 344** |
| Birds, other |  | 155 |  | 42 | 4 | **201** |
| Cats (non-wild) |  | 227 |  | 83 | 366 | **676** |
| Cats (wild) |  | 1 | 27 |  |  | **28** |
| Cattle (domestic) | 6167 | 3124 | 17 555 | 128 | 2319 | **29 293** |
| Cephalopods | 87 | 4 |  |  |  | **91** |
| Crustaceans | 11 534 | 1323 | 11 434 | 172 |  | **24 463** |
| Dasyurids | 28 | 99 | 559 | 55 |  | **741** |
| Dogs (non-wild) | 42 | 1227 | 56 | 361 | 1091 | **2777** |
| Dogs, foxes (wild) |  | 5 | 64 | 18 |  | **87** |
| Domestic mammals, other |  | 88 | 3 | 10 | 32 | **133** |
| Exotic feral mammals, other |  | 4 |  |  |  | **4** |
| Exotic zoo mammals |  |  |  |  | 8 | **8** |
| Ferrets (lab) |  |  |  | 8 | 2895 | **2903** |
| Fish | 3384 | 4731 | 192 899 | 47 813 | 8122 | **256 949** |
| Goats (domestic) |  | 6 |  | 15 | 39 | **60** |
| Guinea pigs (lab) |  | 50 |  | 337 | 4340 | **4727** |
| Horses (domestic) |  | 326 |  | 8 | 625 | **959** |
| Koalas |  | 6 | 517 | 2 | 61 | **586** |
| Laboratory mammals, other |  | 19 |  | 961 |  | **980** |
| Lizards | 14 | 408 | 1213 | 837 |  | **2472** |
| Macaques |  | 7 |  | 64 | 27 | **98** |
| Macropods |  | 61 | 1220 | 636 | 8 | **1925** |
| Marmosets |  |  |  | 84 |  | **84** |
| Mice (lab) | 8751 | 9541 |  | 280 059 | 110 860 | **409 211** |
| Mice (wild) |  | 38 | 186 | 1 |  | **225** |
| Monotremes |  | 1 | 75 | 26 | 10 | **112** |
| Native mammals, other |  | 209 | 2887 | 30 | 102 | **3228** |
| Native rats, mice |  | 134 | 3705 | 82 | 15 | **3936** |
| Pigs (domestic) | 5970 | 243 |  | 238 | 323 | **6774** |
| Pigs (wild) |  |  | 2 |  |  | **2** |
| Possums, gliders |  | 117 | 1770 |  |  | **1887** |
| Poultry | 16 797 | 499 | 99 | 308 | 67 321 | **85 024** |
| Rabbits (lab) | 11 | 42 |  | 266 | 789 | **1108** |
| Rabbits (wild) | 120 | 8 | 264 |  |  | **392** |
| Rats (lab) | 58 | 1090 | 24 | 15 110 | 7301 | **23 583** |
| Rats (wild) |  | 1 | 10 |  |  | **11** |
| Reptiles, other |  |  | 28 |  |  | **28** |
| Seals, sealions |  | 15 | 2073 | 3 |  | **2091** |
| Sheep (domestic) | 16 346 | 78 641 | 15 | 1427 | 10 182 | **106 611** |
| Snakes |  | 7 | 29 | 2 | 4 | **42** |
| Turtles, tortoises | 28 | 1 | 232 |  |  | **261** |
| Whales, dolphins |  |  | 300 | 7 |  | **307** |
| Wombats |  | 11 | 30 |  |  | **41** |
| Total | **69 443** | **117 374** | **305 335** | **357 907** | **217 975** | **1 068 034** |

# Table 2: Number of animals used, by type of animal and animal source, 2015

| **Animal Type** | **Animal source** | | | | | | | | | | **Total** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Specified animal supplier** | **Other specified animal source** | **Animals in their natural habitat** | **Animals removed from natural habitat** | **Colony/zoo** | **Commercial supplier** | **Own derivation** | **Private donation** | **Privately owned animals on a farm** | **Other** |
| Amphibians |  |  | 363 | 599 | 8 | 1310 | 3849 |  |  | 62 | **6191** |
| Birds (exotic captive) |  |  |  |  |  | 29 |  |  |  |  | **29** |
| Birds (exotic wild) |  |  | 1008 | 100 |  |  |  |  |  |  | **1108** |
| Birds (native captive) |  |  | 73 | 6 | 173 | 90 | 816 | 6 |  | 79 | **1243** |
| Birds (native wild) |  |  | 83 858 | 364 | 101 |  |  |  |  | 21 | **84 344** |
| Birds, other |  |  | 194 |  |  | 4 | 3 |  |  |  | **201** |
| Cats (non-wild) |  |  |  |  |  | 6 | 174 |  |  | 496 | **676** |
| Cats (wild) |  |  | 28 |  |  |  |  |  |  |  | **28** |
| Cattle (domestic) |  |  |  |  |  | 17 383 | 1266 | 10 | 10 143 | 491 | **29 293** |
| Cephalopods |  |  | 2 | 89 |  |  |  |  |  |  | **91** |
| Crustaceans |  |  | 11 520 | 2656 |  | 10 287 |  |  |  |  | **24 463** |
| Dasyurids |  |  | 659 | 11 | 60 |  | 11 |  |  |  | **741** |
| Dogs (non-wild) |  |  |  |  |  | 74 | 299 | 333 | 96 | 1975 | **2777** |
| Dogs, foxes (wild) |  |  | 59 |  | 18 |  |  |  |  | 10 | **87** |
| Domestic mammals, other |  |  |  |  |  | 19 |  |  |  | 114 | **133** |
| Exotic feral mammals, other |  |  | 4 |  |  |  |  |  |  |  | **4** |
| Exotic zoo mammals |  |  |  |  | 8 |  |  |  |  |  | **8** |
| Ferrets (lab) |  |  |  |  |  | 2903 |  |  |  |  | **2903** |
| Fish |  |  | 195 426 | 8462 | 24 | 2995 | 49 384 |  |  | 658 | **256 949** |
| Goats (domestic) |  |  |  |  | 3 | 4 | 14 |  | 36 | 3 | **60** |
| Guinea pigs (lab) | 4700 | 27 |  |  |  |  |  |  |  |  | **4727** |
| Horses (domestic) |  |  |  |  | 3 | 85 | 213 | 35 | 389 | 234 | **959** |
| Koalas |  |  | 578 |  | 7 | 1 |  |  |  |  | **586** |
| Laboratory mammals, other |  |  |  |  |  |  | 942 |  |  | 38 | **980** |
| Lizards |  |  | 1046 | 1361 |  |  | 62 |  |  | 3 | **2472** |
| Macaques | 98 |  |  |  |  |  |  |  |  |  | **98** |
| Macropods |  |  | 1230 | 93 | 57 | 300 | 244 |  |  | 1 | **1925** |
| Marmosets | 84 |  |  |  |  |  |  |  |  |  | **84** |
| Mice (lab) | 405 101 | 4110 |  |  |  |  |  |  |  |  | **409 211** |
| Mice (wild) |  |  | 224 |  |  |  |  |  |  | 1 | **225** |
| Monotremes |  |  | 97 |  | 15 |  |  |  |  |  | **112** |
| Native mammals, other |  |  | 3199 |  | 7 |  |  |  |  | 22 | **3228** |
| Native rats, mice |  |  | 3921 | 15 |  |  |  |  |  |  | **3936** |
| Pigs (domestic) |  |  |  |  | 3 | 744 | 300 |  | 5727 |  | **6774** |
| Pigs (wild) |  |  |  | 2 |  |  |  |  |  |  | **2** |
| Possums, gliders |  |  | 1847 | 9 | 30 |  |  |  |  | 1 | **1887** |
| Poultry |  |  |  |  |  | 34 874 | 1133 |  | 48 991 | 26 | **85 024** |
| Rabbits (lab) | 1083 | 25 |  |  |  |  |  |  |  |  | **1108** |
| Rabbits (wild) |  |  | 132 |  |  |  |  |  |  | 260 | **392** |
| Rats (lab) | 23 317 | 266 |  |  |  |  |  |  |  |  | **23 583** |
| Rats (wild) |  |  | 11 |  |  |  |  |  |  |  | **11** |
| Reptiles, other |  |  | 12 |  |  | 16 |  |  |  |  | **28** |
| Seals, sealions |  |  | 2073 |  | 18 |  |  |  |  |  | **2091** |
| Sheep (domestic) |  |  |  |  |  | 2993 | 11 728 | 28 | 91 504 | 358 | **106 611** |
| Snakes |  |  | 25 | 4 | 11 |  | 1 |  |  | 1 | **42** |
| Turtles, tortoises |  |  | 216 | 28 |  | 16 |  |  |  | 1 | **261** |
| Whales, dolphins |  |  | 307 |  |  |  |  |  |  |  | **307** |
| Wombats |  |  | 39 |  |  |  |  |  |  | 2 | **41** |
| Total | **434 383** | **4428** | **308 151** | **13 799** | **546** | **74 133** | **70 439** | **412** | **156 886** | **4857** | **1 068 034** |

# 

# Table 3: Number of animals used, by type of animal and procedures, 2015

| Animal Type | Procedure type | | | | | | | | | | | | | | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Aversive stimuli | Central nervous system | Genetic modification | Immuno–modulatory methods | Infection induction | Ionising radiation | Long term attachment/ insertion | Monoclonal antibody production | Neoplasia | Neuromuscular block, electro-immobilisation | Other disease | Polyclonal antibody production | Skin irritancy | Toxicity | Other procedure |
| Amphibians |  |  | 972 | 2192 | 62 |  |  |  |  |  |  |  |  |  | 2965 | **6191** |
| Birds (exotic captive) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 29 | **29** |
| Birds (exotic wild) |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  | 1105 | **1108** |
| Birds (native captive) | 19 |  |  |  |  |  | 73 |  |  |  |  |  |  |  | 1151 | **1243** |
| Birds (native wild) |  |  |  |  |  |  | 4344 |  |  |  |  |  |  |  | 80 000 | **84 344** |
| Birds, other |  |  |  |  | 4 |  |  |  |  |  |  |  |  |  | 197 | **201** |
| Cats (non-wild) |  | 5 |  | 60 | 27 |  | 70 |  |  | 2 | 6 |  |  | 10 | 496 | **676** |
| Cats (wild) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 28 | **28** |
| Cattle (domestic) | 423 |  |  | 1430 | 97 |  | 91 |  |  |  |  | 23 |  | 30 | 27 199 | **29 293** |
| Cephalopods |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 91 | **91** |
| Crustaceans |  |  |  |  |  |  | 2519 |  |  |  |  |  |  |  | 21 944 | **24 463** |
| Dasyurids | 11 |  |  |  |  |  | 18 |  |  |  |  |  |  |  | 712 | **741** |
| Dogs (non-wild) | 39 | 1 |  | 64 |  |  | 5 |  |  |  |  |  |  | 58 | 2610 | **2777** |
| Dogs, foxes (wild) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 87 | **87** |
| Domestic mammals, other |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 133 | **133** |
| Exotic feral mammals, other |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 | **4** |
| Exotic zoo mammals |  |  |  |  |  |  | 8 |  |  |  |  |  |  |  |  | **8** |
| Ferrets (lab) |  |  |  | 32 | 2821 |  |  |  |  |  |  | 42 |  |  | 8 | **2903** |
| Fish | 726 |  | 23 815 |  | 304 |  | 242 |  | 224 | 345 | 3425 |  |  | 200 | 227 668 | **256 949** |
| Goats (domestic) |  |  |  |  |  |  |  |  |  |  |  | 4 |  |  | 56 | **60** |
| Guinea pigs (lab) |  | 26 | 27 | 334 | 558 |  | 105 |  |  |  |  | 18 |  | 339 | 3320 | **4727** |
| Horses (domestic) |  |  |  | 88 |  | 58 |  | 15 |  |  |  | 34 |  | 70 | 694 | **959** |
| Koalas |  |  |  |  |  |  | 201 |  |  |  |  |  |  |  | 385 | **586** |
| Laboratory mammals, other |  | 55 |  |  |  |  |  |  |  | 19 |  |  |  |  | 906 | **980** |
| Lizards | 508 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1964 | **2472** |
| Macaques |  |  |  |  | 15 |  | 7 |  |  | 2 | 40 |  |  |  | 34 | **98** |
| Macropods |  |  |  |  |  |  | 27 |  |  |  |  |  |  |  | 1898 | **1925** |
| Marmosets |  | 66 |  |  |  |  | 6 |  |  |  |  |  |  |  | 12 | **84** |
| Mice (lab) | 1736 | 6940 | 71 961 | 21 080 | 49 098 | 12 106 | 1420 | 420 | 42 327 |  | 49 660 | 1014 | 160 | 2013 | 149 276 | **409 211** |
| Mice (wild) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 225 | **225** |
| Monotremes |  |  |  |  |  |  | 59 |  |  |  |  |  |  |  | 53 | **112** |
| Native mammals, other |  |  |  |  |  |  | 320 |  |  |  |  |  |  |  | 2908 | **3228** |
| Native rats, mice |  |  |  |  |  |  | 208 |  |  |  |  |  |  |  | 3728 | **3936** |
| Pigs (domestic) |  |  | 81 | 116 | 68 |  |  |  |  |  | 2 |  | 19 | 34 | 6454 | **6774** |
| Pigs (wild) |  |  |  |  |  |  | 2 |  |  |  |  |  |  |  |  | **2** |
| Possums, gliders |  |  |  |  |  |  | 22 |  |  |  |  |  |  |  | 1865 | **1887** |
| Poultry | 2161 |  | 208 | 778 | 12 847 |  |  |  |  |  |  | 110 |  |  | 68 920 | **85 024** |
| Rabbits (lab) |  |  |  | 460 | 2 |  | 6 | 34 |  |  | 204 | 158 |  | 36 | 208 | **1108** |
| Rabbits (wild) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 392 | **392** |
| Rats (lab) | 1251 | 877 | 159 |  | 172 | 42 | 993 | 54 | 107 |  | 5061 | 12 |  | 939 | 13 916 | **23 583** |
| Rats (wild) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11 | **11** |
| Reptiles, other |  |  |  |  | 16 |  |  |  |  |  |  |  |  |  | 12 | **28** |
| Seals, sealions |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  | 2081 | **2091** |
| Sheep (domestic) | 35 | 27 |  | 211 | 941 | 5 | 443 |  |  |  | 354 | 39 |  | 126 | 104 430 | **106 611** |
| Snakes |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 42 | **42** |
| Turtles, tortoises |  |  |  |  | 16 |  |  |  |  |  |  |  |  |  | 245 | **261** |
| Whales, dolphins |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 307 | **307** |
| Wombats |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 41 | **41** |
| Total | **6909** | **7997** | **97223** | **26845** | **67048** | **12211** | **11202** | **523** | **42658** | **368** | **58752** | **1454** | **179** | **3855** | **730810** | **1 068 034** |

# 

# Table 4: Number of animals used, by type of animal and impact of procedure, 2015

| Animal Type | Procedure impact | | | | | | | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Animal unconscious without recovery | Observational study, minor interference | Minor intervention, no anaesthesia | Minor operative procedure with recovery | Minor physiological challenge | Surgery with recovery | Major physiological challenge | Death as an end point |
| Amphibians | 781 | 484 | 764 | 18 | 980 | 3102 | 62 |  | **6191** |
| Birds (exotic captive) |  |  | 29 |  |  |  |  |  | **29** |
| Birds (exotic wild) |  | 911 | 147 |  | 50 |  |  |  | **1108** |
| Birds (native captive) | 24 | 334 | 116 | 6 | 763 |  |  |  | **1243** |
| Birds (native wild) |  | 75 525 | 8400 | 30 | 389 |  |  |  | **84 344** |
| Birds, other | 3 | 194 |  |  | 4 |  |  |  | **201** |
| Cats (non-wild) | 24 | 198 | 311 | 23 |  | 60 | 60 |  | **676** |
| Cats (wild) |  | 28 |  |  |  |  |  |  | **28** |
| Cattle (domestic) | 8 | 21 635 | 7095 | 83 | 472 |  |  |  | **29 293** |
| Cephalopods |  | 2 | 89 |  |  |  |  |  | **91** |
| Crustaceans | 3 | 9634 | 3208 | 11 534 | 84 |  |  |  | **24 463** |
| Dasyurids |  | 310 | 425 | 6 |  |  |  |  | **741** |
| Dogs (non-wild) | 106 | 1268 | 1273 | 105 | 8 | 17 |  |  | **2777** |
| Dogs, foxes (wild) |  | 87 |  |  |  |  |  |  | **87** |
| Domestic mammals, other |  | 48 | 50 | 6 |  | 29 |  |  | **133** |
| Exotic feral mammals, other |  | 4 |  |  |  |  |  |  | **4** |
| Exotic zoo mammals |  | 8 |  |  |  |  |  |  | **8** |
| Ferrets (lab) | 24 | 40 |  |  | 2723 |  | 116 |  | **2903** |
| Fish | 11 774 | 26 689 | 188 965 | 8444 | 18 833 | 89 | 2155 |  | **256 949** |
| Goats (domestic) |  | 20 | 40 |  |  |  |  |  | **60** |
| Guinea pigs (lab) | 515 | 372 | 18 | 82 |  | 200 | 2032 | 1508 | **4727** |
| Horses (domestic) |  | 328 | 416 | 18 | 154 |  | 43 |  | **959** |
| Koalas |  | 383 | 103 | 100 |  |  |  |  | **586** |
| Laboratory mammals, other | 19 | 815 | 91 |  |  | 55 |  |  | **980** |
| Lizards | 128 | 257 | 1958 |  | 129 |  |  |  | **2472** |
| Macaques | 2 | 11 | 7 | 67 |  | 11 |  |  | **98** |
| Macropods | 596 | 1199 | 69 | 47 |  | 14 |  |  | **1925** |
| Marmosets | 14 |  |  |  |  | 70 |  |  | **84** |
| Mice (lab) | 82 737 | 34 249 | 96 003 | 34 501 | 54 209 | 35 417 | 65 454 | 6641 | **409 211** |
| Mice (wild) |  | 1 | 224 |  |  |  |  |  | **225** |
| Monotremes |  | 31 | 81 |  |  |  |  |  | **112** |
| Native mammals, other |  | 1164 | 2061 | 3 |  |  |  |  | **3228** |
| Native rats, mice |  | 2768 | 1168 |  |  |  |  |  | **3936** |
| Pigs (domestic) | 108 | 435 | 5959 | 58 | 52 | 72 | 90 |  | **6774** |
| Pigs (wild) |  | 2 |  |  |  |  |  |  | **2** |
| Possums, gliders |  | 1373 | 503 | 8 | 3 |  |  |  | **1887** |
| Poultry | 12 876 | 66 914 | 1248 |  | 3052 |  | 934 |  | **85 024** |
| Rabbits (lab) | 621 | 23 | 95 | 2 | 67 | 173 | 127 |  | **1108** |
| Rabbits (wild) | 380 | 12 |  |  |  |  |  |  | **392** |
| Rats (lab) | 7864 | 750 | 2616 | 2877 | 2359 | 6072 | 1045 |  | **23 583** |
| Rats (wild) |  |  | 11 |  |  |  |  |  | **11** |
| Reptiles, other |  |  | 12 |  |  |  | 16 |  | **28** |
| Seals, sealions |  | 1002 | 1079 | 10 |  |  |  |  | **2091** |
| Sheep (domestic) | 1391 | 81 311 | 17 036 | 271 | 5936 | 666 |  |  | **106 611** |
| Snakes | 4 | 5 | 33 |  |  |  |  |  | **42** |
| Turtles, tortoises |  | 208 | 37 |  |  |  | 16 |  | **261** |
| Whales, dolphins |  | 307 |  |  |  |  |  |  | **307** |
| Wombats |  | 41 |  |  |  |  |  |  | **41** |
| Total | **120 002** | **331 380** | **341 740** | **58 299** | **90 267** | **46 047** | **72 150** | **8149** | **1 068 034** |

# Table 5: Number of animals used, by type of animal and project benefit, 2015

| Animal Type | Project benefit | | | | | | | | | | | | | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Biological products | Biology/ physiology | Demonstration | Diseases, animal | Diseases, human | Diseases, zoonotic | Domestic animal management | Environment | Pest management | Regulatory testing | Technique development | Training | Wildlife management | Xenotrans- plantation |
| Amphibians |  | 5436 | 26 |  |  |  |  | 282 | 62 |  | 7 | 144 | 234 |  | **6191** |
| Birds (exotic captive) |  |  |  |  |  |  |  |  |  |  | 29 |  |  |  | **29** |
| Birds (exotic wild) |  | 100 |  |  |  |  |  | 177 |  |  |  |  | 831 |  | **1108** |
| Birds (native captive) |  | 875 |  |  |  |  |  | 30 |  |  | 36 | 152 | 150 |  | **1243** |
| Birds (native wild) |  | 1442 | 183 | 681 |  | 716 |  | 55 368 |  |  | 268 | 150 | 25 536 |  | **84 344** |
| Birds, other |  |  |  | 7 |  |  |  |  |  |  | 155 |  | 39 |  | **201** |
| Cats (non-wild) |  | 38 | 123 | 143 | 49 | 89 | 45 |  |  | 100 |  | 89 |  |  | **676** |
| Cats (wild) |  |  |  |  |  |  |  | 6 |  |  |  |  | 22 |  | **28** |
| Cattle (domestic) | 78 | 423 | 63 | 1144 |  |  | 6846 | 17 575 |  | 44 | 1060 | 2060 |  |  | **29 293** |
| Cephalopods |  |  | 2 |  |  |  |  |  |  |  | 2 |  | 87 |  | **91** |
| Crustaceans |  | 104 | 1380 |  |  |  |  | 1907 |  |  | 6 |  | 21 066 |  | **24 463** |
| Dasyurids |  | 5 |  |  |  |  |  | 414 |  |  | 6 | 41 | 275 |  | **741** |
| Dogs (non-wild) | 10 | 226 | 79 | 667 | 20 | 143 | 111 | 6 |  | 424 | 131 | 959 | 1 |  | **2777** |
| Dogs, foxes (wild) |  | 18 |  |  |  |  |  | 25 |  |  | 1 |  | 43 |  | **87** |
| Domestic mammals, other |  |  | 20 |  |  | 3 |  | 3 |  | 29 |  | 78 |  |  | **133** |
| Exotic feral mammals, other |  |  |  |  |  |  |  |  |  |  | 4 |  |  |  | **4** |
| Exotic zoo mammals |  |  | 8 |  |  |  |  |  |  |  |  |  |  |  | **8** |
| Ferrets (lab) | 24 | 8 |  | 2 | 2815 | 54 |  |  |  |  |  |  |  |  | **2903** |
| Fish |  | 37 736 | 216 |  | 11 651 |  | 1140 | 187 587 | 1077 |  | 2512 | 1987 | 13 043 |  | **256 949** |
| Goats (domestic) |  | 4 | 17 |  |  | 36 |  | 3 |  |  |  |  |  |  | **60** |
| Guinea pigs (lab) |  | 200 | 3 | 1189 | 3277 |  |  |  |  | 17 |  | 41 |  |  | **4727** |
| Horses (domestic) | 6 | 3 | 35 | 314 | 46 |  | 105 | 3 |  | 162 | 42 | 243 |  |  | **959** |
| Koalas |  | 2 |  |  |  |  |  | 278 |  |  |  |  | 306 |  | **586** |
| Laboratory mammals, other |  | 930 | 19 |  | 31 |  |  |  |  |  |  |  |  |  | **980** |
| Lizards |  | 590 | 26 |  |  |  |  | 967 |  |  | 22 | 90 | 777 |  | **2472** |
| Macaques | 8 | 28 |  |  | 55 |  |  |  |  |  |  | 7 |  |  | **98** |
| Macropods |  | 636 | 1 |  |  |  |  | 1146 |  |  | 24 | 20 | 98 |  | **1925** |
| Marmosets |  | 84 |  |  |  |  |  |  |  |  |  |  |  |  | **84** |
| Mice (lab) | 1512 | 137 259 | 695 | 15 732 | 233 789 | 1550 | 6640 |  |  | 180 | 2432 | 7672 |  | 1750 | **409 211** |
| Mice (wild) |  |  |  |  |  |  |  | 77 |  |  |  | 7 | 141 |  | **225** |
| Monotremes |  |  |  |  |  |  |  | 26 |  |  |  | 1 | 85 |  | **112** |
| Native mammals, other |  |  |  | 102 |  |  |  | 1528 |  |  | 56 | 12 | 1530 |  | **3228** |
| Native rats, mice |  |  | 11 |  | 15 |  |  | 2866 |  |  | 1 | 55 | 988 |  | **3936** |
| Pigs (domestic) | 5 | 155 | 10 | 151 | 144 | 32 | 5984 | 3 |  | 108 | 37 | 145 |  |  | **6774** |
| Pigs (wild) |  |  |  |  |  |  |  | 2 |  |  |  |  |  |  | **2** |
| Possums, gliders |  |  | 1 |  |  |  |  | 1651 |  |  | 43 | 20 | 172 |  | **1887** |
| Poultry | 6614 | 465 | 52 | 4952 | 750 | 95 | 66 212 |  |  | 5416 | 215 | 253 |  |  | **85 024** |
| Rabbits (lab) | 114 | 263 |  | 478 | 169 |  |  |  |  | 42 | 10 | 32 |  |  | **1108** |
| Rabbits (wild) |  |  |  |  |  |  |  |  | 380 |  | 8 |  | 4 |  | **392** |
| Rats (lab) | 121 | 10 531 | 163 | 268 | 10 509 |  | 52 |  |  | 1035 | 57 | 847 |  |  | **23 583** |
| Rats (wild) |  |  |  |  |  |  |  | 2 |  |  | 1 |  | 8 |  | **11** |
| Reptiles, other |  |  |  |  |  |  |  |  | 16 |  |  |  | 12 |  | **28** |
| Seals, sealions |  | 3 |  |  |  |  |  | 1094 |  |  |  |  | 994 |  | **2091** |
| Sheep (domestic) | 904 | 1484 | 46 | 3253 | 705 |  | 20 048 | 15 |  | 994 | 789 | 78 373 |  |  | **106 611** |
| Snakes | 4 |  |  |  |  |  |  | 19 |  |  | 3 |  | 16 |  | **42** |
| Turtles, tortoises |  |  |  |  |  |  |  | 9 | 16 |  |  | 1 | 235 |  | **261** |
| Whales, dolphins |  |  |  |  |  |  |  |  |  |  |  |  | 307 |  | **307** |
| Wombats |  |  | 2 |  |  |  |  | 30 |  |  | 9 |  |  |  | **41** |
| Total | **9400** | **199 048** | **3181** | **29 083** | **264 025** | **2718** | **107 183** | **273 099** | **1551** | **8551** | **7966** | **93 479** | **67 000** | **1750** | **1 068 034** |

# Table 6: Number of animals used, by type of animal and deaths, 2015

| **Animal Type** | **Animal death** | | | **Total animals** |
| --- | --- | --- | --- | --- |
| **Death as an endpoint** | **Other deaths** | **Total deaths** |
| Amphibians |  | 5031 | 5031 | **6191** |
| Birds (exotic captive) |  |  |  | **29** |
| Birds (exotic wild) |  |  |  | **1108** |
| Birds (native captive) |  | 128 | 128 | **1243** |
| Birds (native wild) |  | 56 | 56 | **84 344** |
| Birds, other |  | 7 | 7 | **201** |
| Cats (non-wild) |  | 72 | 72 | **676** |
| Cats (wild) |  |  |  | **28** |
| Cattle (domestic) |  | 125 | 125 | **29 293** |
| Cephalopods |  | 83 | 83 | **91** |
| Crustaceans |  | 10 394 | 10 394 | **24 463** |
| Dasyurids |  | 12 | 12 | **741** |
| Dogs (non-wild) |  | 132 | 132 | **2777** |
| Dogs, foxes (wild) |  |  |  | **87** |
| Domestic mammals, other |  | 6 | 6 | **133** |
| Exotic feral mammals, other |  |  |  | **4** |
| Exotic zoo mammals |  |  |  | **8** |
| Ferrets (lab) |  | 559 | 559 | **2903** |
| Fish |  | 45 674 | 45 674 | **256 949** |
| Goats (domestic) |  | 37 | 37 | **60** |
| Guinea pigs (lab) | 1508 | 2421 | 3929 | **4727** |
| Horses (domestic) |  | 8 | 8 | **959** |
| Koalas |  | 30 | 30 | **586** |
| Laboratory mammals, other |  | 961 | 961 | **980** |
| Lizards |  | 226 | 226 | **2472** |
| Macaques |  | 10 | 10 | **98** |
| Macropods |  | 622 | 622 | **1925** |
| Marmosets |  | 58 | 58 | **84** |
| Mice (lab) | 6641 | 357 651 | 364 292 | **409 211** |
| Mice (wild) |  |  |  | **225** |
| Monotremes |  | 2 | 2 | **112** |
| Native mammals, other |  | 2 | 2 | **3228** |
| Native rats, mice |  | 3 | 3 | **3936** |
| Pigs (domestic) |  | 399 | 399 | **6774** |
| Pigs (wild) |  |  |  | **2** |
| Possums, gliders |  | 5 | 5 | **1887** |
| Poultry |  | 18 893 | 18 893 | **85 024** |
| Rabbits (lab) |  | 1006 | 1006 | **1108** |
| Rabbits (wild) |  | 380 | 380 | **392** |
| Rats (lab) |  | 20 607 | 20 607 | **23 583** |
| Rats (wild) |  |  |  | **11** |
| Reptiles, other |  | 16 | 16 | **28** |
| Seals, sealions |  |  |  | **2091** |
| Sheep (domestic) |  | 4593 | 4593 | **106 611** |
| Snakes |  | 4 | 4 | **42** |
| Turtles, tortoises |  | 18 | 18 | **261** |
| Whales, dolphins |  |  |  | **307** |
| Wombats |  |  |  | **41** |
| Total | **8149** | **470 231** | **478 380** | **1 068 034** |

# Table 7: Number of animals used, by project purpose and project benefit, 2015

| Overall purpose | Project benefit | | | | | | | | | | | | | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Biological products | Biology/ physiology | Demon–stration | Diseases, animal | Diseases, human | Diseases, zoonotic | Domestic animal manage–ment | Environ–ment | Pest manage–ment | Regulatory testing | Technique develop–ment | Training | Wildlife manage–ment | Xenotrans- plantation |
| Educational objectives | 205 | 1705 | 2969 | 160 | 16 |  | 385 | 663 |  |  | 4443 | 93 218 | 13 610 |  | **117 374** |
| Environmental objectives |  | 667 | 154 | 104 |  |  |  | 265 821 | 1431 |  |  | 68 | 37 090 |  | **305 335** |
| Improvement of animal management / production | 207 | 1058 | 16 | 1284 | 1221 |  | 45 854 | 424 | 120 | 2649 | 1887 |  | 14 723 |  | **69 443** |
| Maintenance/ improvement of human/ animal health/ welfare | 8681 | 8121 | 11 | 21 115 | 111 163 | 1017 | 59 777 | 20 |  | 5902 | 1456 | 168 | 544 |  | **217 975** |
| Understanding of human/animal biology | 307 | 187 497 | 31 | 6420 | 151 625 | 1701 | 1167 | 6171 |  |  | 180 | 25 | 1033 | 1750 | **357 907** |
| Total | **9400** | **199 048** | **3181** | **29 083** | **264 025** | **2718** | **107 183** | **273 099** | **1551** | **8551** | **7966** | **93 479** | **67 000** | **1750** | **1 068 034** |

# Table 8: Number of animals used, by project purpose and procedure impact, 2015

| **Overall purpose** | **Procedure impact** | | | | | | | | **Total** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Animal unconscious without recovery | Observational study, minor interference | Minor intervention,  no anaesthesia | Minor operative procedure with recovery | Minor physiological challenge | Surgery with recovery | Major physiological challenge | Death as an end point |
| Educational objectives | **6673** | **95 458** | **12 731** | **727** | **88** | **56** | **1641** |  | **117 374** |
| Environmental objectives | 2159 | 106 292 | 195 392 | 155 | 628 | 89 | 620 |  | **305 335** |
| Improvement of animal management/production | 2445 | 22 253 | 25 222 | 11 787 | 6627 | 1047 | 62 |  | **69 443** |
| Maintenance/improvement of human/animal health/welfare | 29 563 | 62 497 | 27 420 | 17 385 | 23 582 | 19 583 | 29 796 | 8149 | **217 975** |
| Understanding of human/animal biology | 79 162 | 44 880 | 80 975 | 28 245 | 59 342 | 25 272 | 40 031 |  | **357 907** |
| Total | **120 002** | **331 380** | **341 740** | **58 299** | **90 267** | **46 047** | **72 150** | **8149** | **1 068 034** |

# Table 9: Number of animals used, by project purpose and procedure, 2015

| Overall purpose | Procedure | | | | | | | | | | | | | | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Aversive stimuli | Central nervous system | Genetic modifi–cation | Immuno- modulatory methods | Infection induction | Ionising radiation | Long term attachment /insertion | Monoclonal antibody production | Neo–plasia | Neuro–muscular block, electro-immobilisation | Other disease | Polyclonal antibody production | Skin irritancy | Toxicity | Other |
| Educational objectives | 36 | 12 | 206 | 15 | 32 |  | 105 |  |  |  | 2 |  |  |  | 116 966 | **117 374** |
| Environmental objectives | 448 |  |  |  | 398 |  | 3990 |  |  | 345 |  |  |  | 200 | 299 954 | **305 335** |
| Improvement of animal management/ production | 2580 |  | 2132 | 809 | 2821 |  | 2638 |  |  |  |  | 11 | 19 |  | 58 433 | **69 443** |
| Maintenance /improvement of human/ animal health/ welfare | 581 | 1586 | 29 359 | 8724 | 34 138 | 4131 | 734 | 75 | 10 965 |  | 20 020 | 779 | 160 | 2821 | 103 902 | **217 975** |
| Understanding of human/ animal biology | 3264 | 6399 | 65 526 | 17 297 | 29 659 | 8080 | 3735 | 448 | 31 693 | 23 | 38 730 | 664 |  | 834 | 151 555 | **357 907** |
| Total | **6909** | **7997** | **97 223** | **26 845** | **67 048** | **12 211** | **11 202** | **523** | **42 658** | **368** | **58 752** | **1454** | **179** | **3855** | **730 810** | **1 068 034** |

# Table 10: Number of animals used by project purpose and animal source, 2015

| Overall purpose | Animal source | | | | | | | | | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specified animal supplier | Other specified animal source | Animals in their natural habitat | Animals removed from natural habitat | Colony/ zoo | Commercial supplier | Own derivation | Private donation | Private animals on farm | Other |
| Educational objectives | 10 488 | 242 | 17 962 | 551 | 98 | 2887 | 3827 | 348 | 79 505 | 1466 | **117 374** |
| Environmental objectives | 24 |  | 284 425 | 2366 | 166 | 17 489 | 22 |  | 500 | 343 | **305 335** |
| Improved animal management/production | 8798 | 22 | 386 | 4498 | 141 | 14 030 | 9131 |  | 31 887 | 550 | **69 443** |
| Maintenance/improvement human/animal health/welfare | 122 700 | 617 | 1268 | 384 | 70 | 35 247 | 11 970 | 61 | 44 220 | 1438 | **217 975** |
| Understanding of human/animal biology | 292 373 | 3547 | 4110 | 6000 | 71 | 4480 | 45 489 | 3 | 774 | 1060 | **357 907** |
| Total | **434 383** | **4428** | **308 151** | **13 799** | **546** | **74 133** | **70 439** | **412** | **156 886** | **4857** | **1 068 034** |