

Annual Survey on Supply of Laboratory Animals in Japan  
(Number of Animals Supplied in Fiscal Year 2022, from April 2022 to March 2023)

Japanese Society for Laboratory Animal Resources  
(September 2023)

### Introduction

This survey has been conducted every three fiscal years since FY1985 to determine changes over time in the supply of laboratory animals in Japan, and the current survey, conducted in FY2022 (April 2022 - March 2023), is the 13th in the series.

The survey method was the same as in the previous one: a questionnaire survey was administered to a total of 29 corporations, including breeders and distributors of laboratory animals, animal experiment facilities of universities, and national research institutes that supply laboratory animals, to determine the number of animals produced, purchased, and imported for sale to users of laboratory animals. The survey form was mailed to the corporations, that were asked to respond even if they had no record of supply.

### Survey Targets

Of the 29 corporations surveyed, 26 were commercial suppliers of laboratory animals, 2 were university animal experiment facilities, and one national research institute. Twenty-four of the 26 commercial suppliers are members of JSLAR (Japanese Society for Laboratory Animal Resources) and/or JCAL (Japan Cooperative Association for Laboratory Animals). Fourteen of them are members of both associations, and the remaining two suppliers are not members of either association. Twenty-six corporations had supply records (Table 1).

Table 1. Questionnaire Response

Survey targets	Sent mail(A)	Response (B)	Animal supply*	Response rate (B/A)
Member of JSLAR and/or JCAL**	24	24	23	100%
University/National Institute	3	3	2	100%
Others***	2	2	1	100%
Total	29	29	26	—

\*: Corporations with supply records of laboratory animals.

\*\* : Japanese Society for Laboratory Animal Resources (JSLAR), Japan Cooperative Association for Laboratory Animals (JCAL).

\*\*\*: Corporations not belong to any associations.

## Summary of Survey Results

During the 37 years between the first survey in FY1985 and the current survey in FY2022, the number of surveyed corporations has decreased by about one-third, from 81 to 29, and the number of corporations with supply records also showed the same trend, from 60 to 26 (Table 2).

Table 2. Changes in the Number of Survey Targets

Fiscal Year	1985	1988	1991	1995	1998	2001	2004	2007	2010	2013	2016	2019	2022
Survey requests	81	87	66	65	57	52	66	52	44	44	45	38	29
Response	64	68	52	57	54	49	64	52	44	43	42	37	29
Animal Supply*	60	56	45	49	44	43	40	44	44	39	36	33	26

\*: Number of corporations with supply records of laboratory animals

All species except hamsters and goats showed a decrease in supply from the previous survey. The number of mice decreased by about one-third from 9.39 million in FY1988, when it was the maximum, to 2.59 million. Rats decreased from the maximum of 3.8 million in FY1991 to 482.9 thousand (13%), guinea pigs decreased from the maximum of 534.8 thousand in FY1998 to 45.6 thousand (9%), dogs decreased from the maximum of 38.9 thousand in FY1991 to 3.2 thousand (8%), and cats decreased from the maximum of 11.4 thousand in FY1985 to 192 (2%). This downward trend has continued from the time of the maximum to the present survey (Table 3).

On the other hand, the supply of monkeys had been on a downward trend since FY1985, but after bottoming out in FY1998, it began to increase, peaking in FY2007 and then declining again. The number of imported monkeys, including those for exhibition, was 5,386 (January - December 2022), according to the Annual Report of Animal Quarantine Service\*, a discrepancy of 3,543 from the current survey. This discrepancy was similar in the previous year, 2019, and may be attributed to the large number of direct imports by users and purchases from sources other than those covered by this survey.

The supply of pigs increased from FY1985, reaching its first peak in FY1991, but then began to decline, bottomed out in FY2007, and began to increase again, reaching a second peak of over 5 thousand in FY2019, but this time the number decreased slightly to 4,257.

In terms of genetic category, closed colonies, inbred and mutant strains accounted for 96% of the mouse population, while closed colonies accounted for 92% of the rat population, a trend similar to the previous year in FY2019.

In terms of microbiological category, SPF was almost 100% in mice, rats, guinea pigs, and hamster species.

\*Since July 1, 2005, the importation of monkeys has been prohibited except for testing, research, and display purposes. The number of imported monkeys, exactly released from quarantine facilities, is published annually in the report by the Animal Quarantine Service, Ministry of Agriculture, Forestry and Fisheries.

Number of monkeys imported (The Annual Report of the AQS, January – December)

2007: 7,464 heads/ 2010: 5,820/ 2013: 5,215/ 2016: 5,834/ 2019: 4,885/ 2022: 5,386

Table 3. Number of Laboratory Animals Supplied in FY 2022 (April 2022 - March 2023)

Species	Categories of genetic control	Categories of microbiological control				Ratio to 2019 (A/B)	Total in 2019 (B)	Maximum Number through Surveys (FY)*
		Conventional	Clean	SPF	Total (A)			
Mouse	Closed colony	0	12	794,901	794,913	0.81	987,463	
	Inbred	0	0	1,449,007	1,449,007	0.93	1,559,350	
	Hybrid	0	0	67,472	67,472	0.71	95,074	
	Mutant	0	0	230,409	230,409	0.75	308,284	
	Congenic	0	0	2,403	2,403	1.13	2,119	
	Transgenic	0	0	41,795	41,795	1.21	2,110	
	Total	0	12	2,585,987	2,585,999	0.87	34,485	9,389,912 (1988)
Rat	Closed colony	0	0	442,963	442,963	0.77	578,592	
	Inbred	0	0	30,654	30,654	0.74	41,429	
	Hybrid	0	0	183	183	—	0	
	Mutant	0	0	9,012	9,012	0.37	24,607	
	Transgenic	0	0	74	74	—	0	
	Total	0	0	482,886	482,886	0.75	644,628	3,801,348 (1991)
Guinea pig		0	0	45,605	45,605	0.85	53,666	534,833 (1998)
Hamster spp.		0	0	20,022	20,022	3.40	5,887	82,510 (1998)
Mongolian gerbil		0	0	322	322	0.30	1,057	40,263 (1998)
Rabbit		849	9.46	19,105	29,000	0.87	33,381	333,824 (1985)
Dog		3,189	0	0	3,189	0.93	3,435	38,915 (1991)
Cat		192	0	0	192	0.59	323	11,415 (1985)
Monkey spp.		1,843	0	0	1,843	0.79	2,320	3,462 (2007)
Pig		1,019	58	3,180	4,257	0.84	5,085	5,085 (2019)
Goat		11	0	0	11	2.75	4	84 (1998)
Sheep		0	0	0	0	-	0	66 (1998)
Avian spp.		169	0	877	1,046	0.60	1,739	44,830 (1988)
Fertilized Chicken Egg		19,863	0	2,630	22,493	0.57	39,304	1,053,479 (1991)
Other species	Mammals**	128	14	7	149	0.85	175	4,469 (1998)
	Non-mammals	1,493	0	0	1,493	0.57	2,619	26,557 (2001)

\*: The column exhibits the maximum numbers of each species through the early surveys.

\*\* : Suncus murinus and ferret.