

2024 NHIA Semen Survey Reveals Shifting Trends in Dairy and Beef Breeding

The National Herd Improvement Association of Australia (NHIA) has released the results of its 2024 Semen Survey, highlighting significant shifts in breeding trends across the dairy and beef industries. The report shows a notable decline in dairy semen sales, offset by a corresponding rise in dairy-beef semen use, reflecting evolving market dynamics and farmer decision-making.

Dairy-Beef Driving Change

The survey revealed an approximate 47,000 unit shift from dairy to dairy-beef semen, as more farmers strategically breed lower-ranking cows to beef semen rather than dairy semen. Jim Bruce, Country Manager Australia and NZ, Viking Genetics, noted that while headline figures suggest an 8.1% decline in dairy semen sales, from 1,787,697 to 1,642,517 units, the effective drop is closer to 5.5% when factoring in the rise in dairy-beef semen use.

"What we're seeing is not necessarily a drop in demand, but rather a change in sales patterns," Bruce explained. "Dairy farmers are becoming more strategic, using a combination of sexed, conventional, and beef semen to maximise herd performance and financial returns."

Beef semen sold for dairy use, 254,524 units, made up 48% of the 530,514 total beef semen sales in 2024. In the previous two years beef semen sold for dairy use made up 40% (2023) and 32% (2022) of total beef semen sales.

Industry Challenges and Market Pressures

NHIA Director Nick Kendall highlighted broader economic and industry challenges that are influencing breeding decisions.

"Dairy-beef has become an attractive option for producers facing financial pressures, particularly in light of the loss of export markets for dairy heifers," Kendall said. "With beef semen often a quarter of the price of sexed dairy semen, and a ready market for dairy-beef calves, this trend is likely to continue."

The survey also reflected ongoing struggles in the beef AI sector, with beef-on-beef semen sales impacted by weaker cattle prices and tighter farm margins, declining just over 10% year-on-year to 204,478 units. Kendall noted that while registered breeders continue to utilise AI, commercial beef operations have scaled back due to lower returns on investment.

Declining Dairy Semen Export & Shifts in Genetic Selection

While export sales of dairy semen remained steady, falling just 0.43% year-on-year, the longer term decline in Australian dairy semen exports remains a challenge, largely due to government regulations and border controls. Since 2020 export sales have declined from 307,340 units to 99,564 in 2024. However, there is optimism that growth opportunities in Asia, particularly Indonesia, could provide future market expansion.

The report also examined changing breeder preferences, with older, more traditional breeders continuing to favour proven bulls, while younger breeders are more open to genomic options. Kendall noted that the proven sire market appears capped, as these bulls age out and are replaced by genomics.

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While the headline figure shows a decline in genomic semen sales of 7.7% to 1,161,023 units, genomic semen made up 66.6% of the total 1,744,081 dairy semen market, identical to the previous year. Semen sales from proven bulls made up 27.5% of the total market.

Sexed Semen Decline and Future Outlook

A 16.3% year-on-year decline in sexed semen sales was reported, primarily due to the drop in dairy heifer exports and reduced dairy production. However, NHIA expects this decline to stabilise over the next 12 months rather than continue at the same rate.

"We're seeing a flattening of conventional dairy semen use, and when you add in dairy-beef, there's actually a slight overall increase," says Jim Bruce. "Farmers are being smarter with their breeding decisions, focusing on maximising herd efficiency and income generation."

Imported and domestic conventional semen sales declined 4.6% to 1,078,600 units in 2024, making up 65.7% of the total market. Sexed semen doses sold – 549,872 units – made up 33.5% of the market.

Smarter Breeding Strategies Emerging

The survey indicates that dairy farmers are adopting more strategic breeding programs, ranking their cows and selectively using semen to optimise replacement numbers. Many are now breeding the top third of their herd to sexed semen, the middle third to conventional dairy semen, and the bottom third to beef, ensuring maximum returns while managing herd size efficiently.

"The market is evolving, and breeders are adapting," Bruce concluded. "These trends highlight the importance of flexibility and forward-thinking strategies to ensure long-term sustainability in both the dairy and beef industries."

The National Herd Improvement Association of Australia Semen Survey is conducted annually with data drawn from Australia's leading genetics companies.

NHIA would like to thank the 2024 Semen Market Survey participants who provided the raw data for this report.

The participants were:

ABS Australia | Agri-Gene | Alta Genetics | Genetics Australia - Total Livestock Genetics | LIC | Rocky Repro | Semex | ST Genetics Australia | Viking Genetics | World Wide Sires

Contact Sara Merckel on 0411 819 165 or sara@nhia.org.au for further information.

About NHIA: Formed in 1995 as the successor to the Herd Improvement Organisation Victoria, The National Herd Improvement Association of Australia Incorporated (NHIA) is the industry organisation that promotes herd improvement within the Australian dairy industry, providing a range of services to its membership, and through that membership, to benefit Australian dairy farmers. The member base includes organisations involved directly in the provision of herd improvement services, a range of activities that lead to productivity gains to farmers as well as herd industry improvement suppliers.

NATIONAL HERD IMPROVEMENT
NHIA
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2024 Semen Market Survey

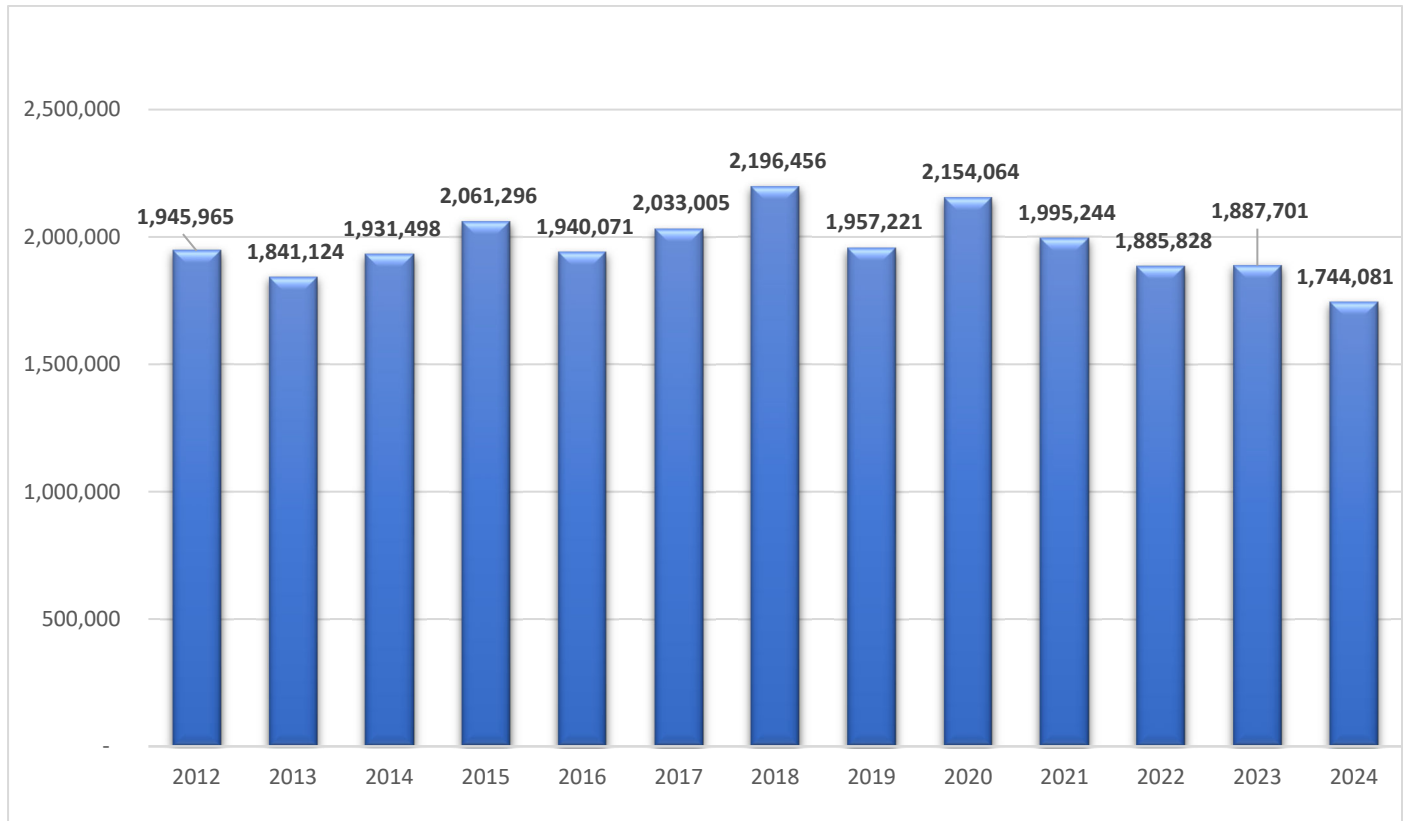
We thank and acknowledge the member organisations that supplied Data



The data is presented in a calendar year format Jan-Dec

This information was historically a financial year. From 2021 the format is a calendar year as agreed by participants

Total Dairy Semen Sales for Import, Domestic, Export

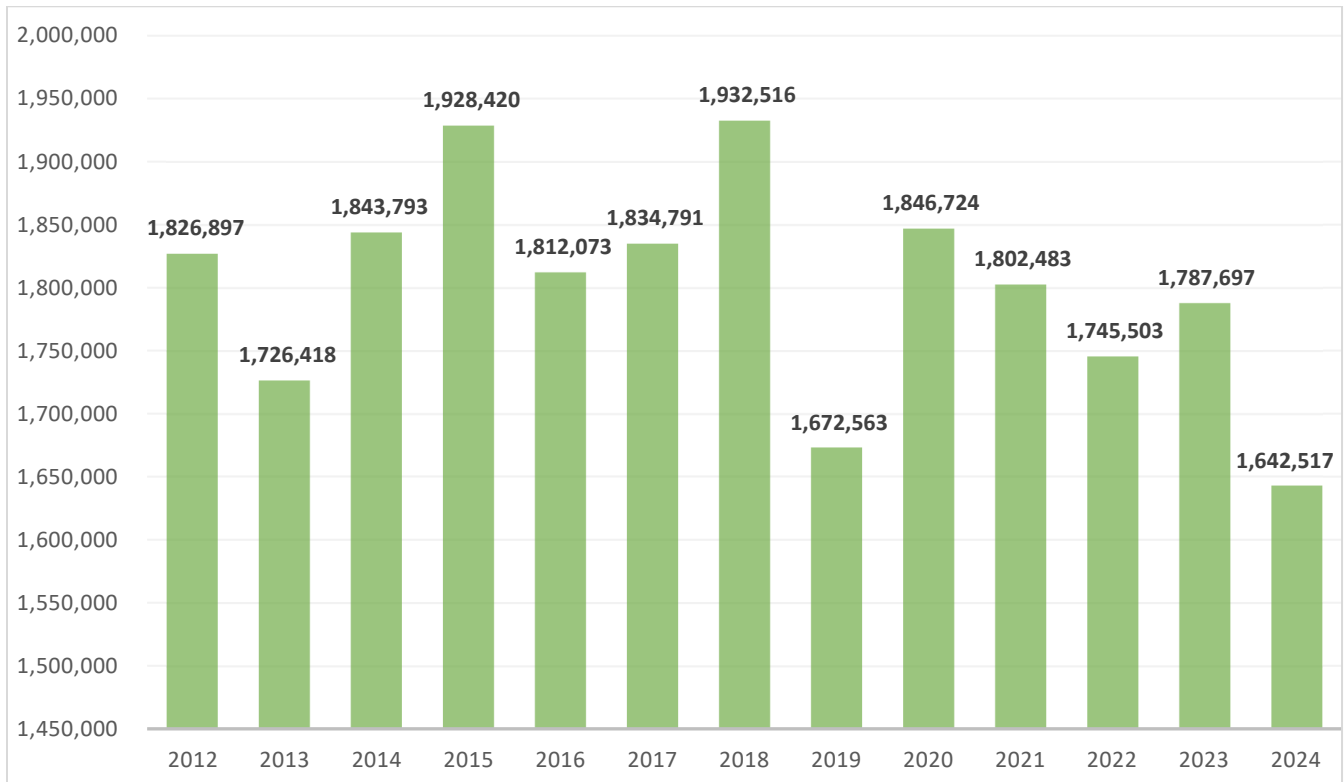


Data from the 2024 Semen Market Survey

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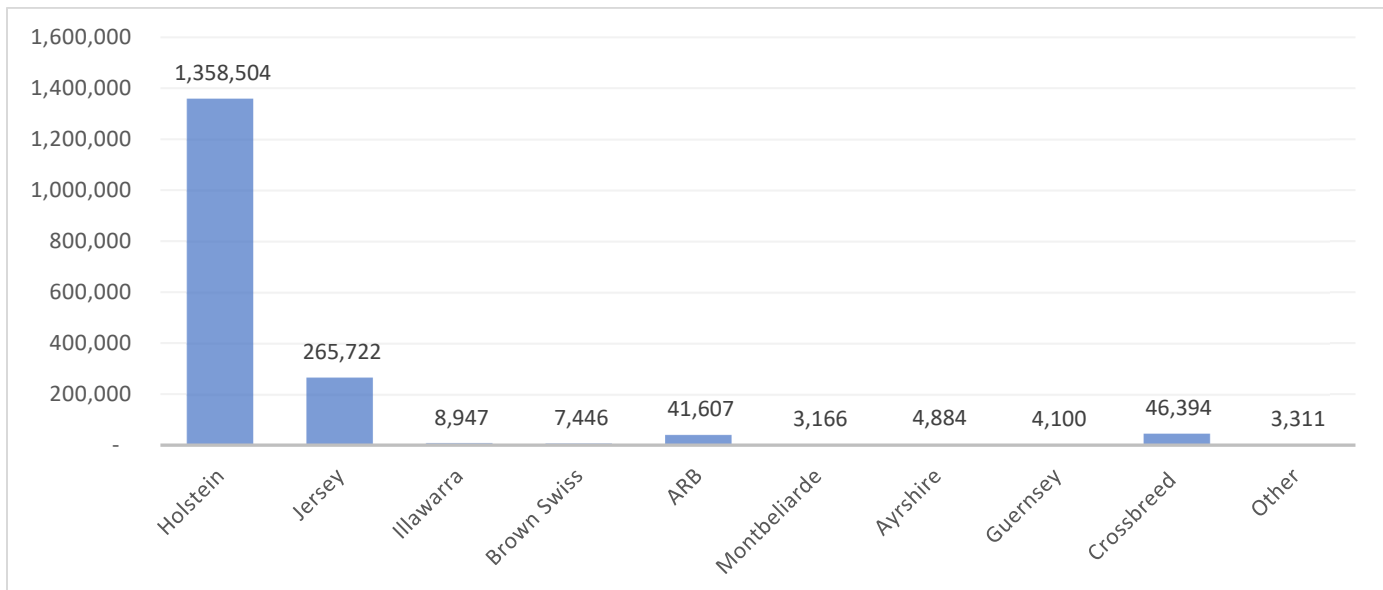
Information Supplied by: National Herd Improvement Association of Australia Inc. Tel: 1300 844 220 | Email: sara@nhia.org.au

Total Dairy Semen Sales for Import and Domestic



Note: Excludes Export figures from table on page one (1)

Total Dairy Semen Sales by breed for Import, Domestic and Export



Note: The next table shows a year-on-year snapshot

Data from the 2024 Semen Market Survey

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Dairy Semen Sales by Breed: Year-on-Year Comparison

For Import Domestic and Export

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Holstein	1,597,106	1,516,992	1,609,595	1,733,733	1,521,883	1,735,095	1,595,969	1,505,347	1,484,485	1,358,504
Jersey	327,186	270,795	281,648	301,945	287,231	268,265	235,967	247,448	250,970	265,722
Illawarra	12,281	14,540	11,216	16,845	10,841	9,603	12,355	12,868	10,278	8,947
Brown Swiss	15,351	12,545	11,832	11,481	8,982	7,040	8,742	7,547	8,467	7,446
ARB	55,180	48,210	58,512	67,151	65,797	72,341	81,343	52,866	50,679	41,607
Montbeliarde	2,563	2,736	1,972	1,770	2,061	1,166	1,385	980	998	3,166
Ayrshire	9,193	13,671	8,427	7,251	6,647	5,808	6,304	5,718	5,313	4,884
Guernsey	4,374	6,043	3,707	5,012	4,781	4,098	5,381	3,934	4,120	4,100
Crossbred	34,577	48,475	41,375	43,278	43,207	43,626	44,461	46,796	55,309	46,394
Other	3,485	6,091	4,721	7,990	5,791	7,022	3,337	2,325	17,082	3,311
Total	2,061,296	1,940,098	2,033,005	2,196,456	1,957,221	2,154,064	1,995,244	1,885,829	1,887,701	1,744,081

Data from the 2024 Semen Market Survey

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Dairy Semen Sales by Breed: For Import and Domestic

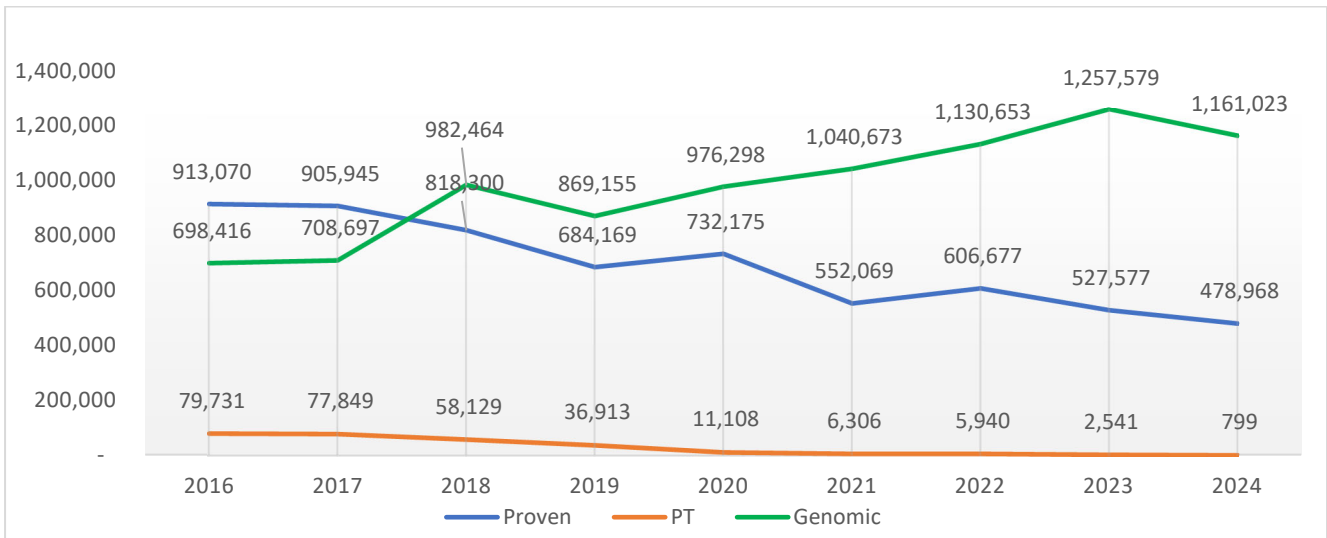
	2022	2023	2024
Holstein	1,448,885	1,455,508	1,346,325
Jersey	178,396	188,082	187,826
Illawarra	9,750	9,214	8,317
Brown Swiss	7,547	8,407	7,148
ARB	41,172	43,786	31,241
Montbeliarde	980	996	3,162
Ayrshire	5,718	5,297	4,713
Guernsey	3,934	4,120	4,100
Crossbreed	46,796	55,309	46,394
Other	2,325	16,978	3,921
TOTAL	1,745,503	1,787,697	1,642,517

Data from the 2024 Semen Market Survey

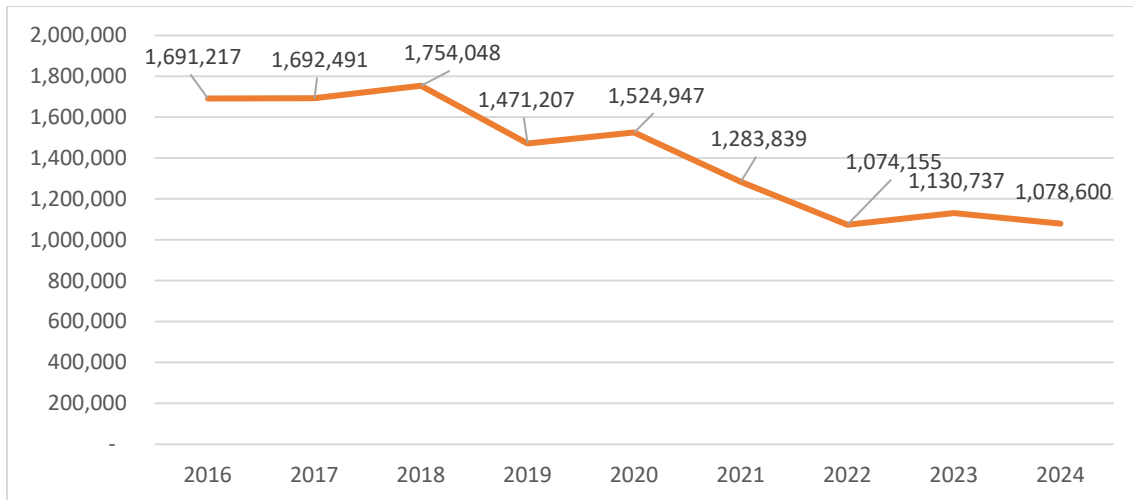
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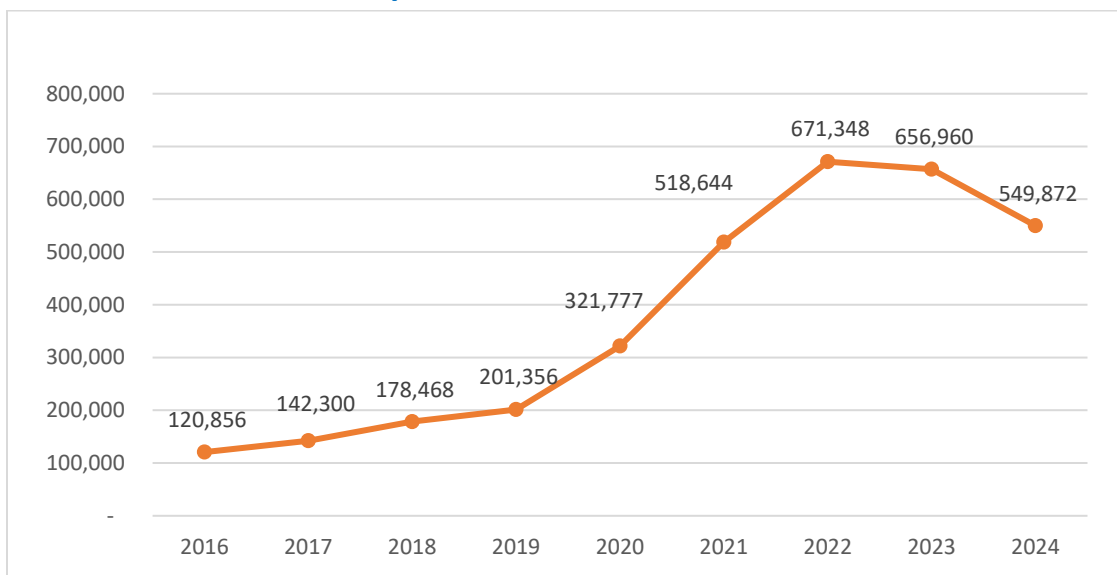
Dairy Semen Sales by Category



Doses of Conventional Semen Imported and Domestic



Doses of Sexed Semen Sold Imported and Domestic: Genomic, Proven, Fresh Frozen

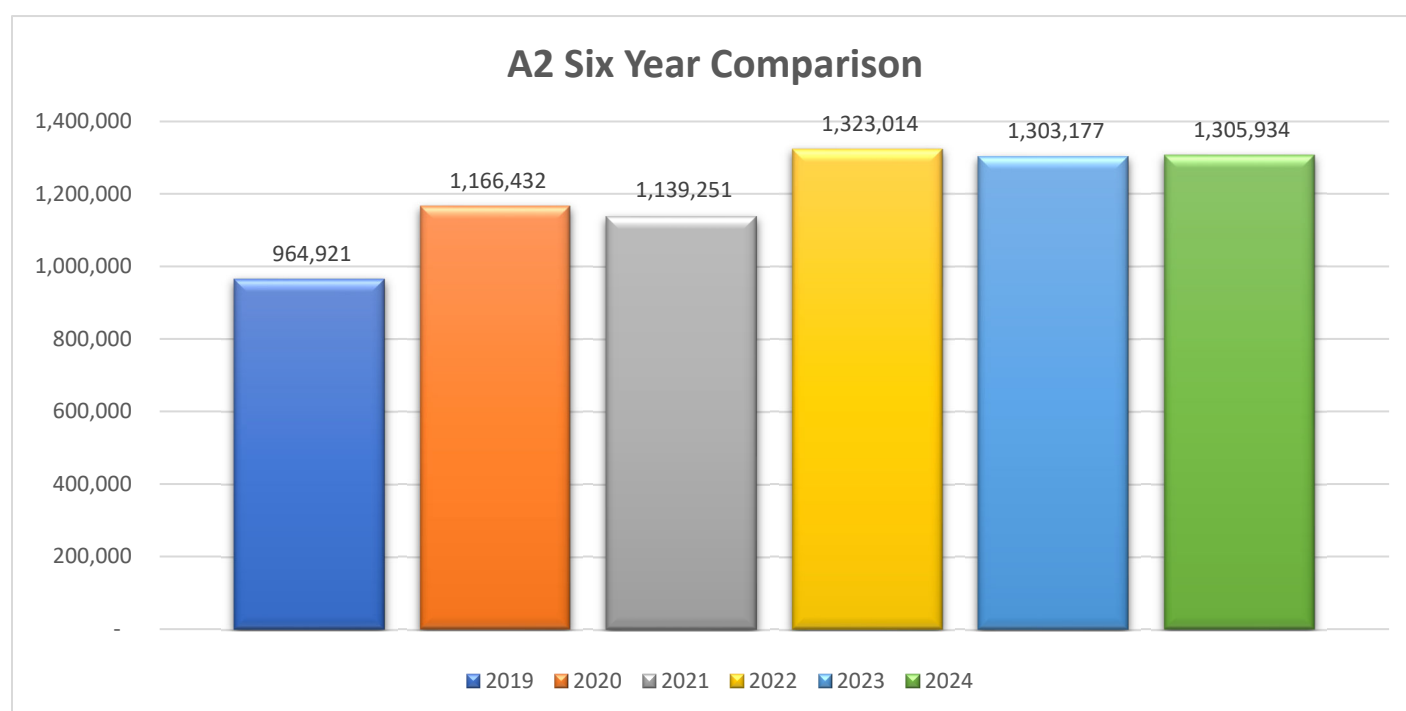


Domestic Dairy Market Semen Sales

	2021	2022	2023	2024
Conv	1,283,839	1,074,155	1,130,737	1,078,600
Sexed	518,644	671,348	656,960	563,917
Imp. Beef on Dairy	76,361	93,942	121,491	162,910
Dom Beef on Dairy	82,015	95,251	85,715	91,614
Total	1,960,859	1,934,696	1,994,903	1,879,041

Note The above table shows that while the total number of dairy cows declined by 81,818 between 2021 - 2024, the total number of beef doses used on dairy farms has increased significantly, with the decline in live dairy heifer export a major factor as farmers look to replace this income stream with dairy beef.

Total doses of semen sold from bulls genomically selected for A2



Note: 2019 was the beginning of measuring A2. The chart represents the four years where data has been captured.

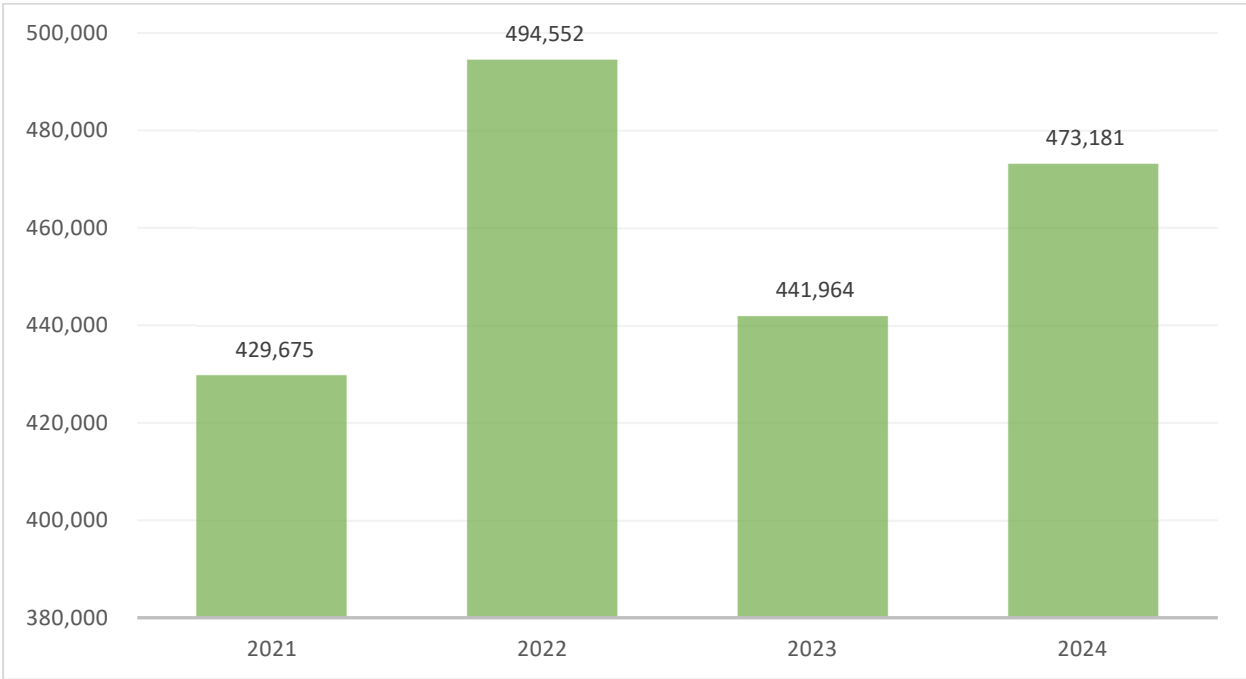
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Beef Data

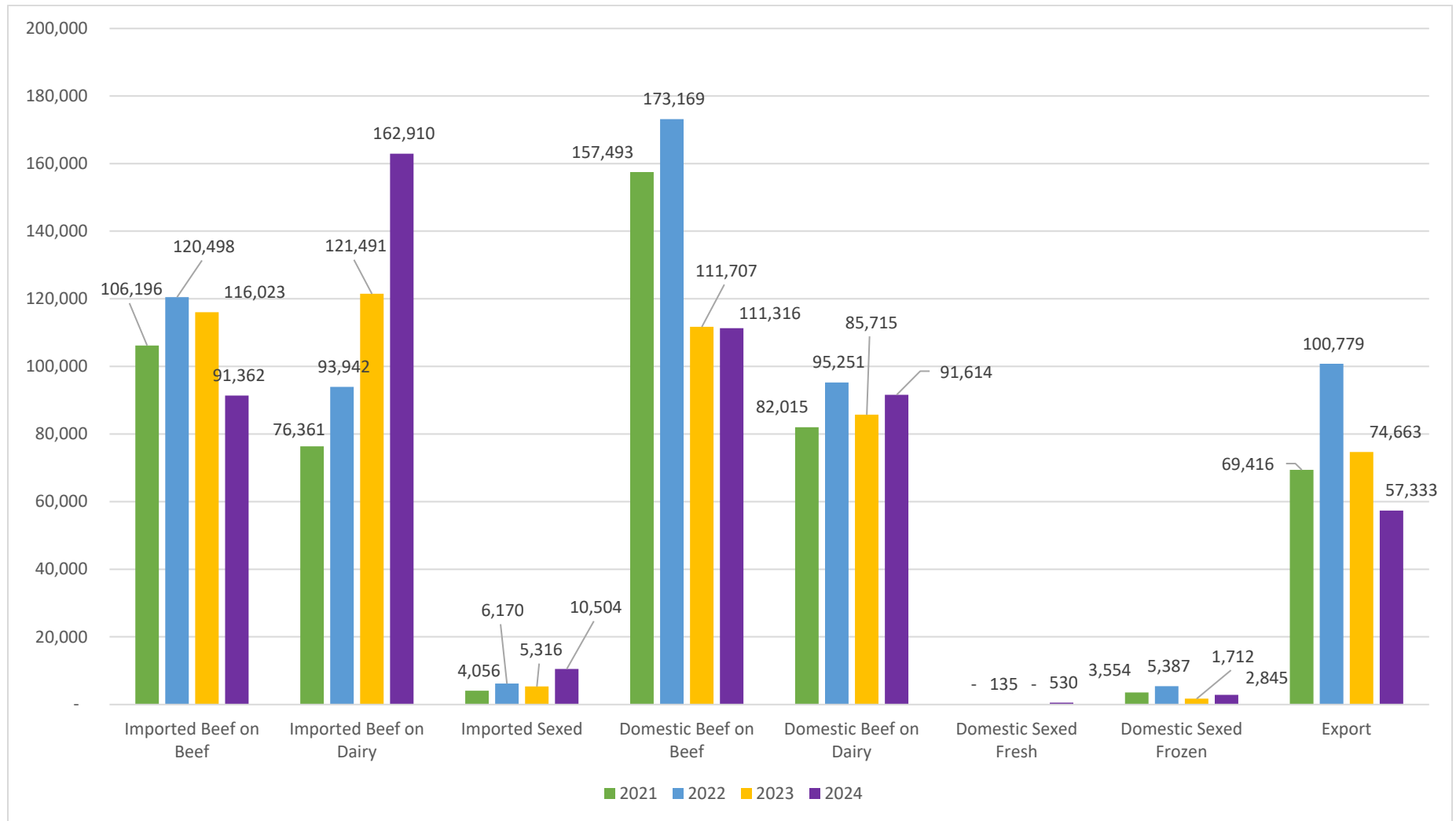
Import and Domestic Beef Doses for: 2021, 2022, 2023, 2024



Note Above excludes export. Export details are on the following page.

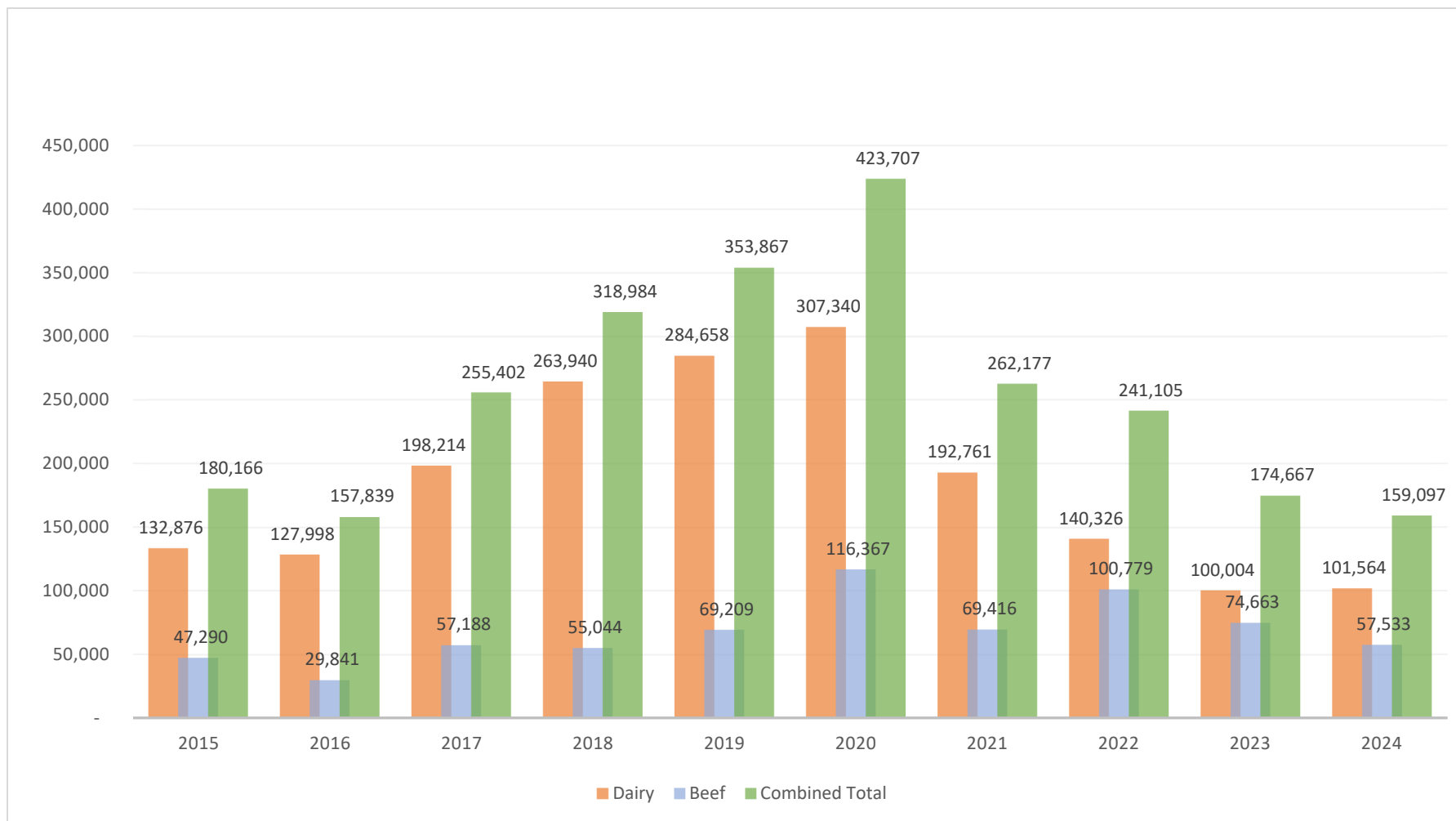


Beef Doses: Domestic and Import, Export Years: 2021, 2022, 2023, 2024



Note: 2021 was the beginning of capturing beef in the above categories.

Export: Dairy and Beef Doses



This data is proudly produced by NHIA.

Thank you to the supporting companies who supplied their data to track this valuable information.

Dairy and Beef Participants

ABS Australia | Agri-Gene | Alta Genetics | Genetics Australia-Total Livestock Genetics | LIC | Rocky Repro | Semex | ST Genetics Australia | Viking Genetics | World Wide Sires

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