Jersey SA

Demography & Genetic Comparison

From 2014 up to the latest available records

A data-led view of population records, production, fertility, udder health and genetic progress

What the data tells us

Three Jersey SA datasets were combined for this comparison

2014
Baseline year

2024
Latest broadly populated genetic year

2025–26
Partial phenotypic records

Phenotypic records: 305-day milk, butterfat %, protein %, SCC, age at first calving and inter-calving period.

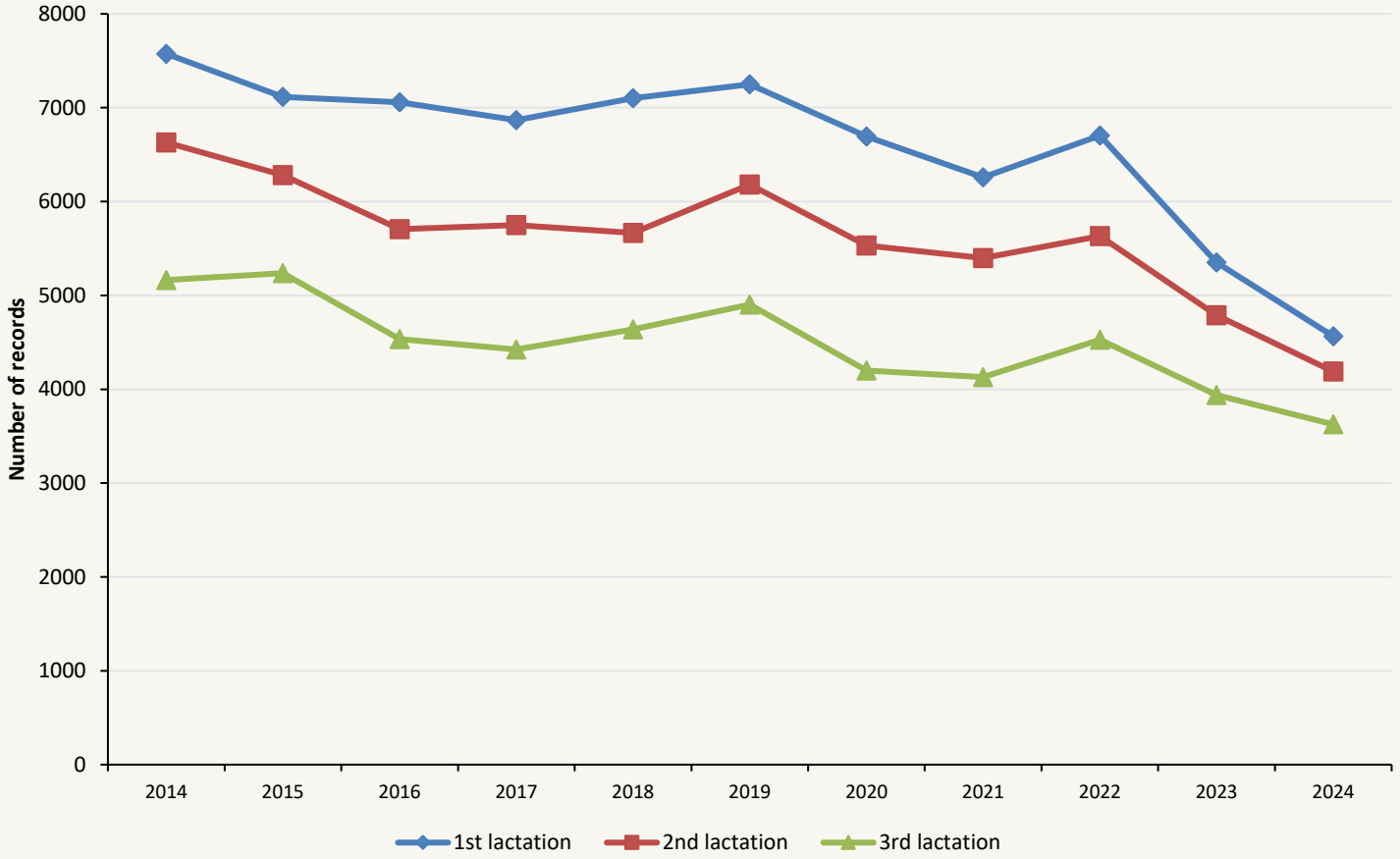
Genetic records: milk, fat, protein, component percentages and somatic cell score breeding values.

Linear genetic trends: body, feet & legs and udder traits.

Important: record counts describe animals/records in these files — not the total national Jersey population.

Demography: fewer records, but a strong performance base

First-, second- and third-lactation record counts



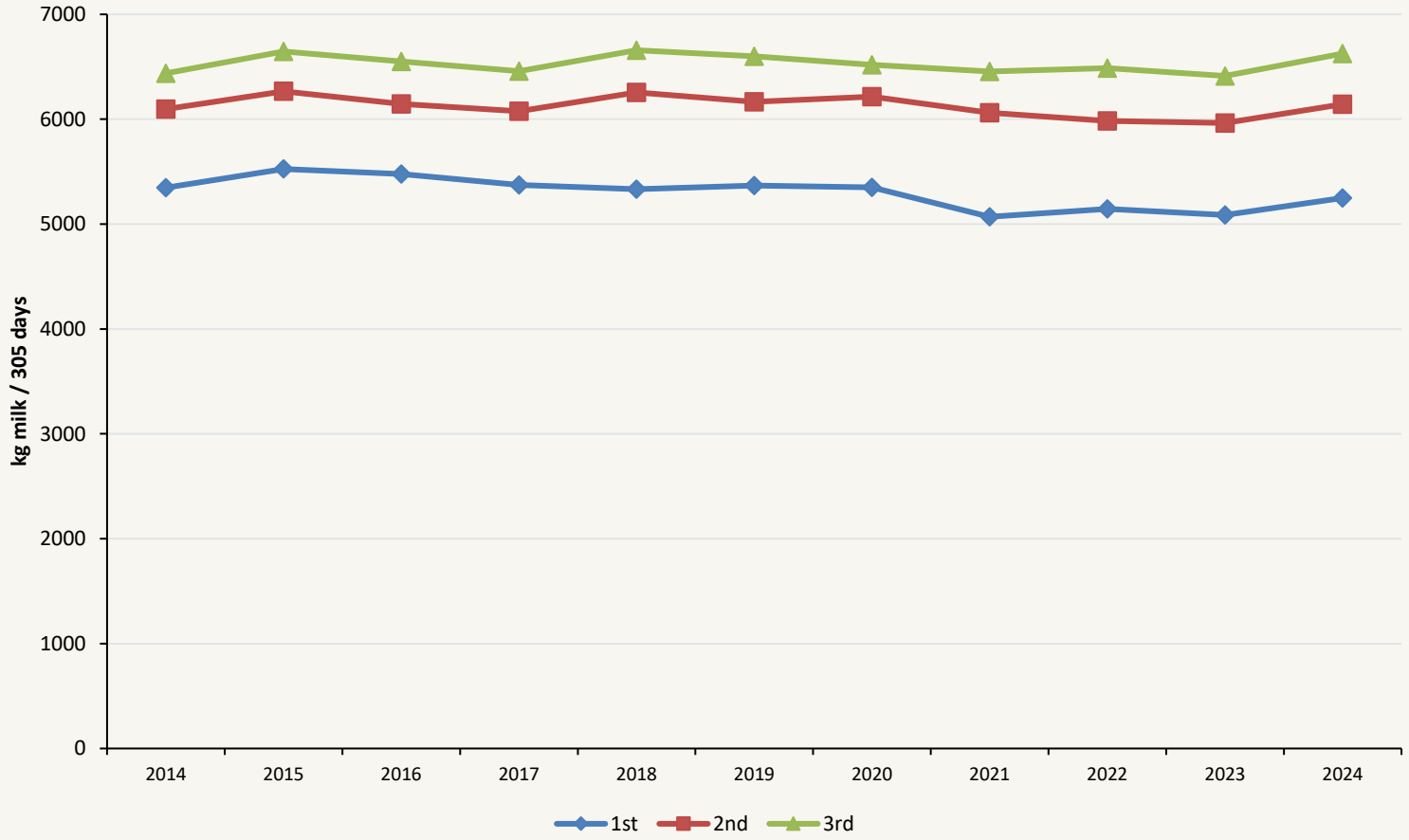
7,575
1st-lactation records in 2014

4,565
1st-lactation records in 2024

-40%
Change in recorded 1st lactations

Phenotypic milk yield: later lactations show clear gains

305-day milk production (kg)



5,250 kg
2024 1st lactation (-1.8% vs 2014)

6,143 kg
2024 2nd lactation (+0.8% vs 2014)

6,625 kg
2024 3rd lactation (+2.9% vs 2014)

Milk components: concentration has improved

Comparison of 2014 with 2024

4.75% → 5.05%
Butterfat % — 1st lactation

4.80% → 5.06%
Butterfat % — 2nd lactation

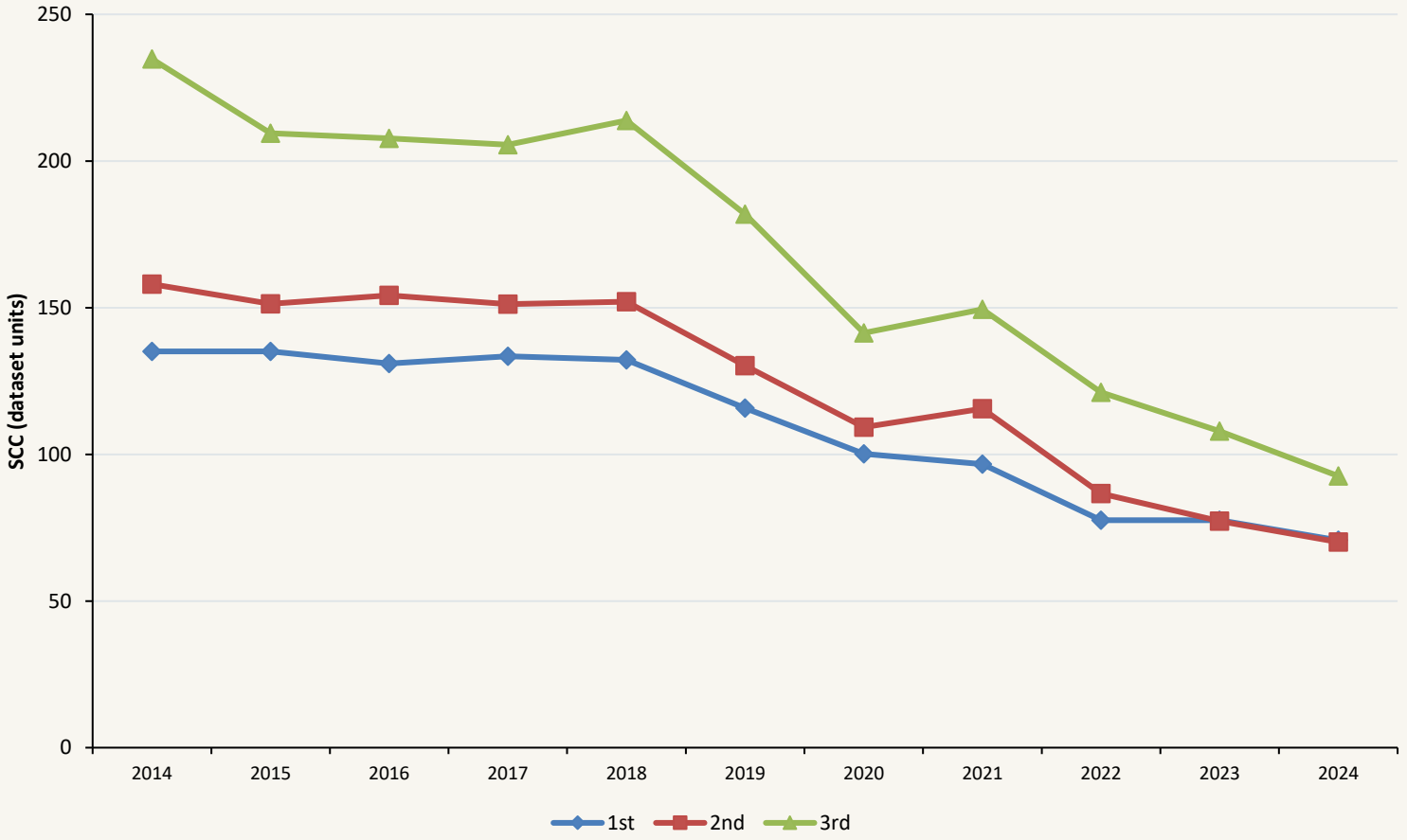
3.73% → 3.84%
Protein % — 1st lactation

3.77% → 3.87%
Protein % — 2nd lactation

The shift is not only about litres: the recorded population is also producing milk with stronger fat and protein concentration.

Udder health: a major phenotypic improvement

Average SCC in the records fell sharply across lactations



71

2024 1st lactation (-48% vs 2014)

70

2024 2nd lactation (-56% vs 2014)

93

2024 3rd lactation (-61% vs 2014)

Fertility: calving efficiency has strengthened

Age at first calving and inter-calving period

25.3 → 24.8 months

Age at first calving: 2014 → 2024

408 → 379 days

1st inter-calving period: 2014 → 2024

Age at first calving improved by about 0.4 months.

First inter-calving period shortened by about 29 days.

Shorter intervals support lifetime efficiency, provided health, body condition and longevity are maintained.

Genetic production trend: direction of selection is visible

Relative breeding values in the genetic dataset

-77.64 → +58.07
Milk RBV: 2014 → 2023

-6.06 → +6.60
Fat kg RBV: 2014 → 2023

-5.16 → +3.75
Protein kg RBV: 2014 → 2023

-0.03 → +0.06
Fat % RBV: 2014 → 2023

-0.03 → +0.03
Protein % RBV: 2014 → 2023

2023 is used here as the latest robust comparison year; 2024 genetic records are present but sample sizes are much smaller.

Linear genetic trends: modern Jersey type continues to evolve

Selected RBVs, 2014 versus 2023

97.7 → 101.4
Wither height

98.9 → 101.8
Chest width

99.3 → 101.3
Body depth

96.4 → 101.0
Fore udder attachment

99.7 → 99.9
Rear udder height

99.0 → 100.4
Udder cleft

Interpret linear-trait movement against the Jersey SA breeding objective: not every trait should simply be maximised; balance and functional type remain essential.

2014 → now: the Jersey SA story in one slide

The clearest changes in the available records

-40%
1st-lactation record count

+2.9%
3rd-lactation milk yield

+0.30 %-pt
1st-lactation butterfat

-48%
1st-lactation SCC

0.4 mo
Earlier first calving

29 d
Shorter 1st calving interval

Headline: a smaller recorded base is showing meaningful gains in components, udder health, fertility and several genetic indicators.

What should Jersey SA protect — and build next?

Turning progress into the next decade of breed development

Grow participation and recording: genetic progress is most powerful when the reference population is broad and well connected.

Keep selecting for profitable solids while protecting fertility, udder health and longevity.

Use genomics, accurate pedigrees and consistent performance recording to shorten the generation interval.

Maintain functional Jersey type rather than chasing extremes in individual linear traits.

Strengthen youth, breeder and research partnerships so that the data base grows with the breed.

The opportunity: more Jerseys recorded, more accurately — with every generation more efficient, healthy and profitable.

Data notes

How to read the comparisons

Source files: Jersey_Fenotipiese_Verandering_John.xlsx; JSE_Genetiese_Veranderinge_John.xlsx; Jersey_Lin_Genetiese_Trends_John.xlsx.

2014 is the requested baseline. 2024 is used for most phenotypic comparisons because it is broadly populated.

2025–2026 values are visible in parts of the phenotypic file but are incomplete and should not be treated as full-year population estimates.

For linear genetic traits, 2023 is used as the latest robust comparison because the 2024 linear dataset contains only 22 records.

The term “demography” in this presentation refers to record counts represented in the supplied datasets, not a census of all Jerseys in South Africa.