

Changes occurring in the breed composition of U.S. dairy herds

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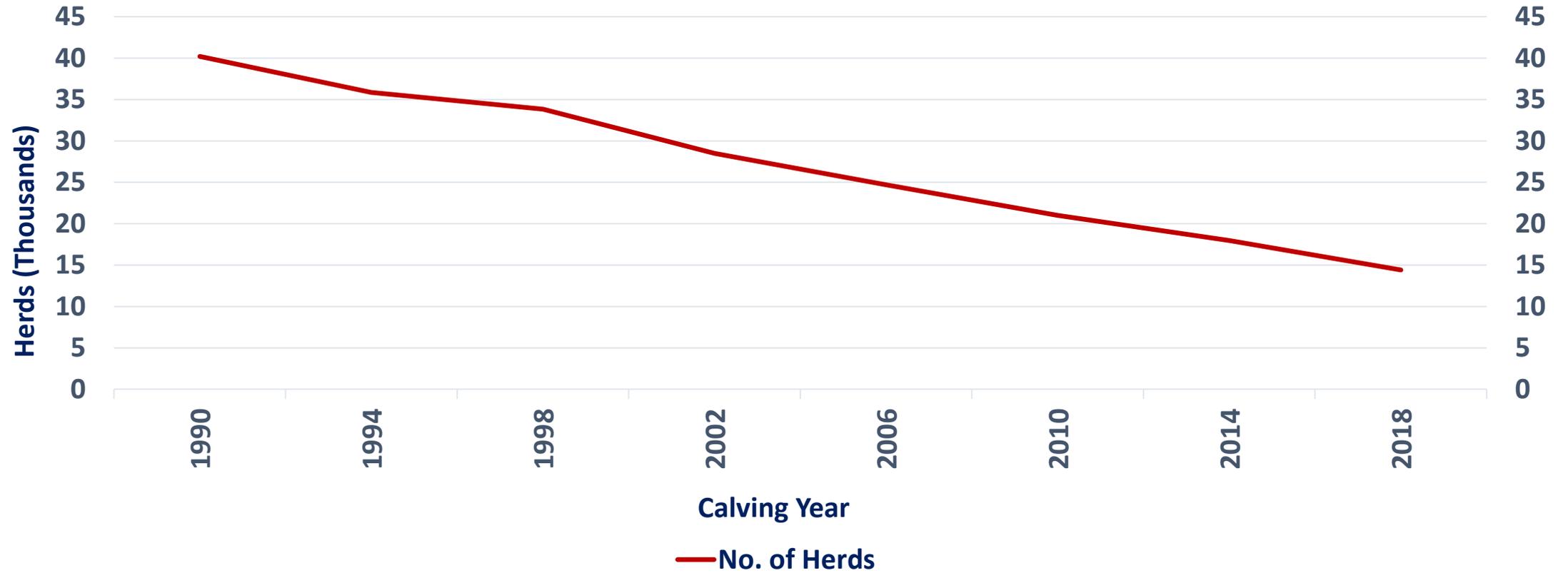


Breed Composition of U.S. Dairy Herds

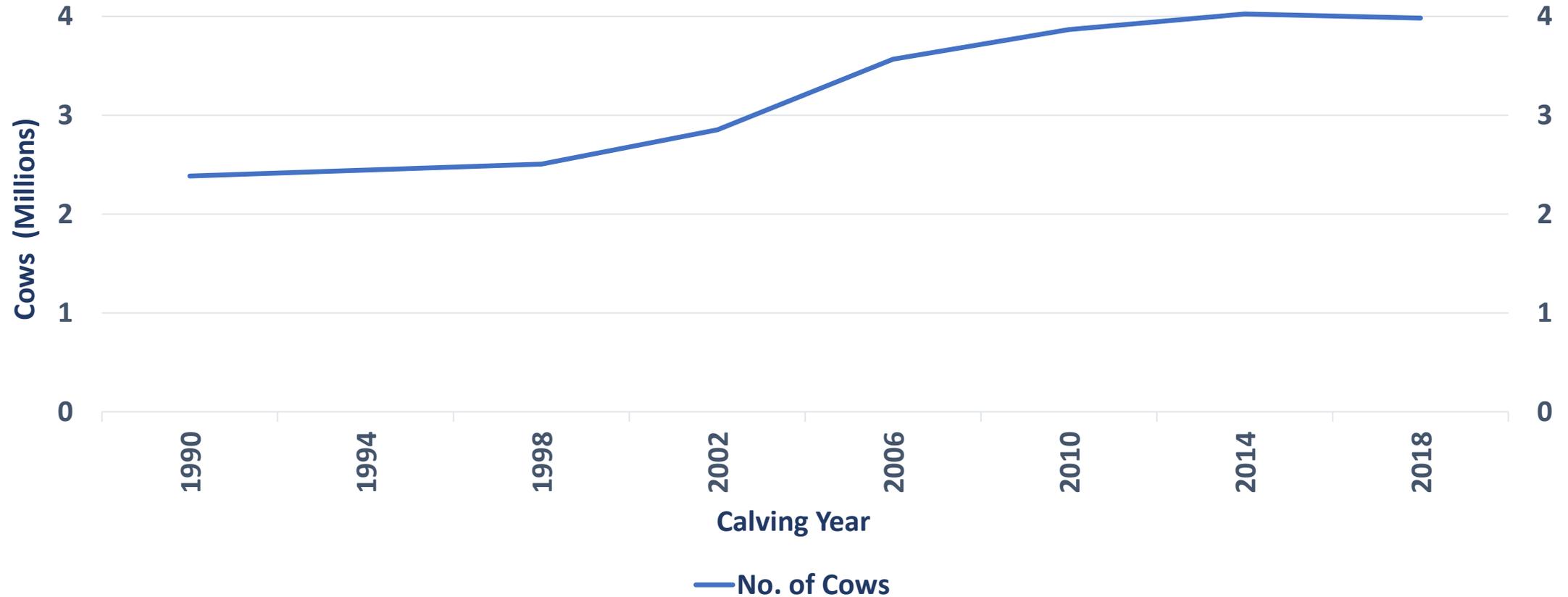
- **Pedigree based** breed composition of Dairy Herd Improvement (DHI) herds investigated from 1990-2018
- Breed – Animals' recorded breed code (mandatory Sire ID)
- **Crossbred – Animals' breed code assigned as 'XX' or 'XD'**
- Year – Calving year
- Breed – AY, BS, GU, HO, JE, MS, XX-XD
- All remaining breeds



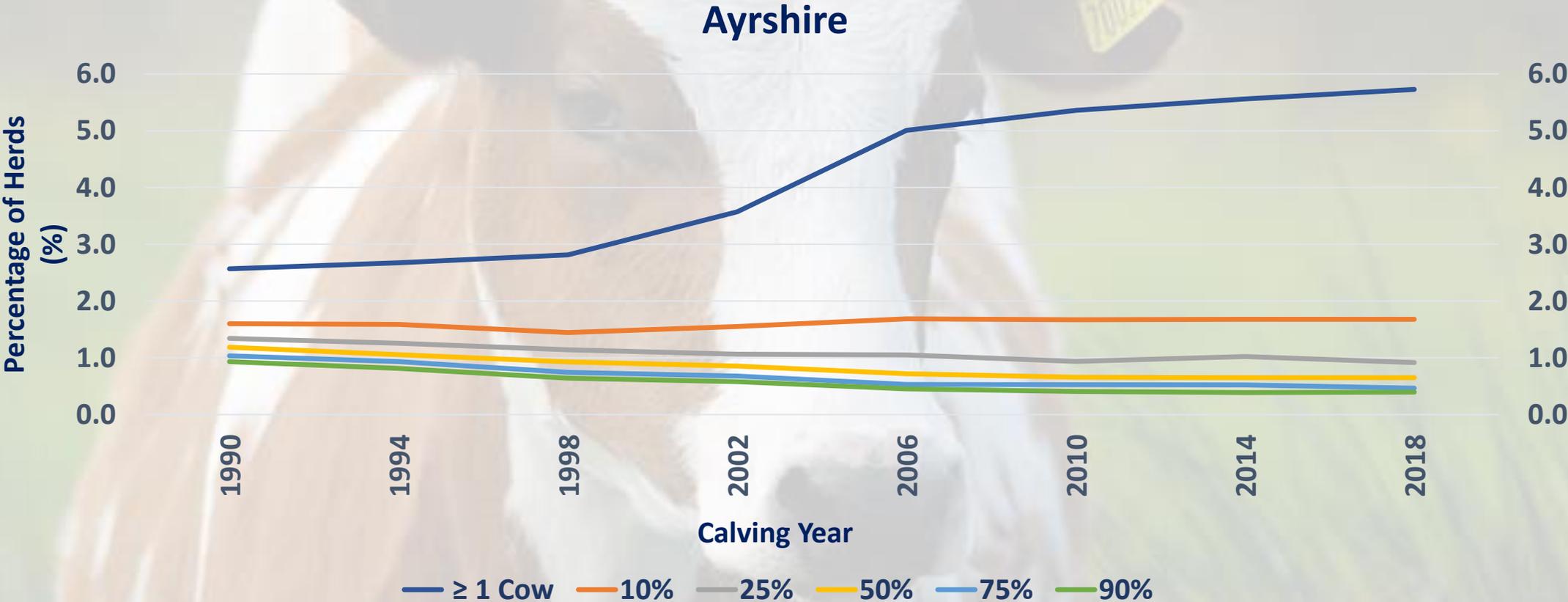
Number of DHI Herds



Number of DHI Cows with Sire ID

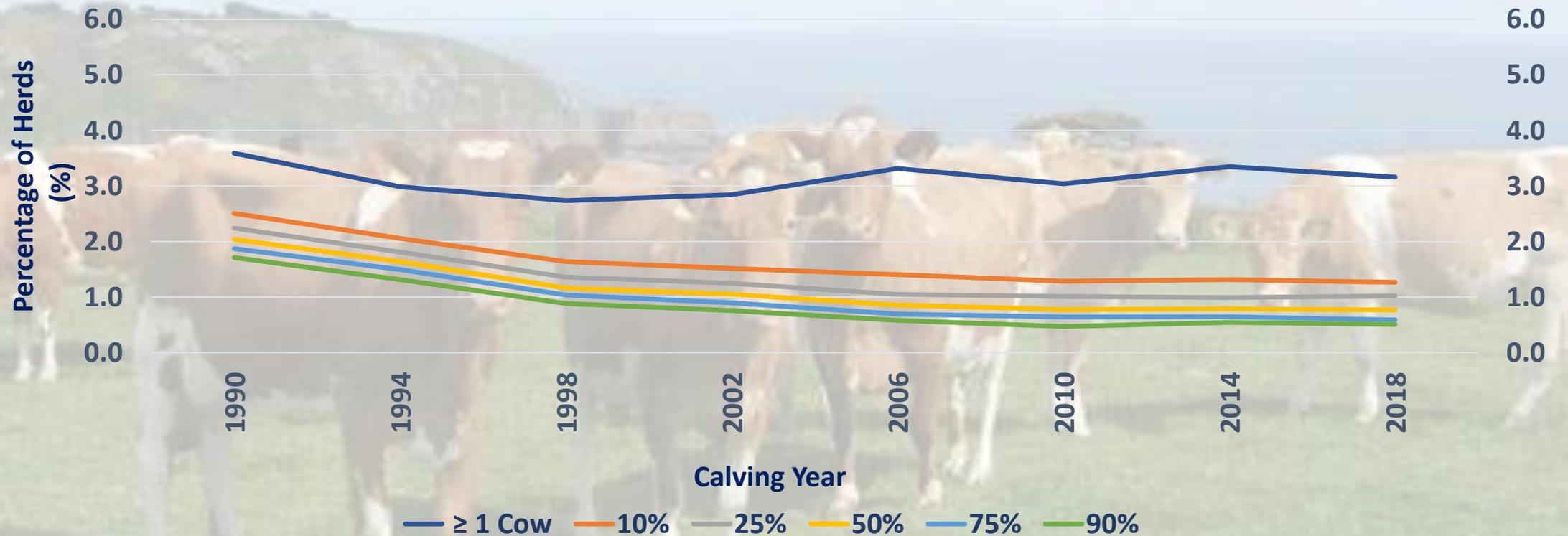


Breed Composition of DHI Herds by Year (Scale 6.0)



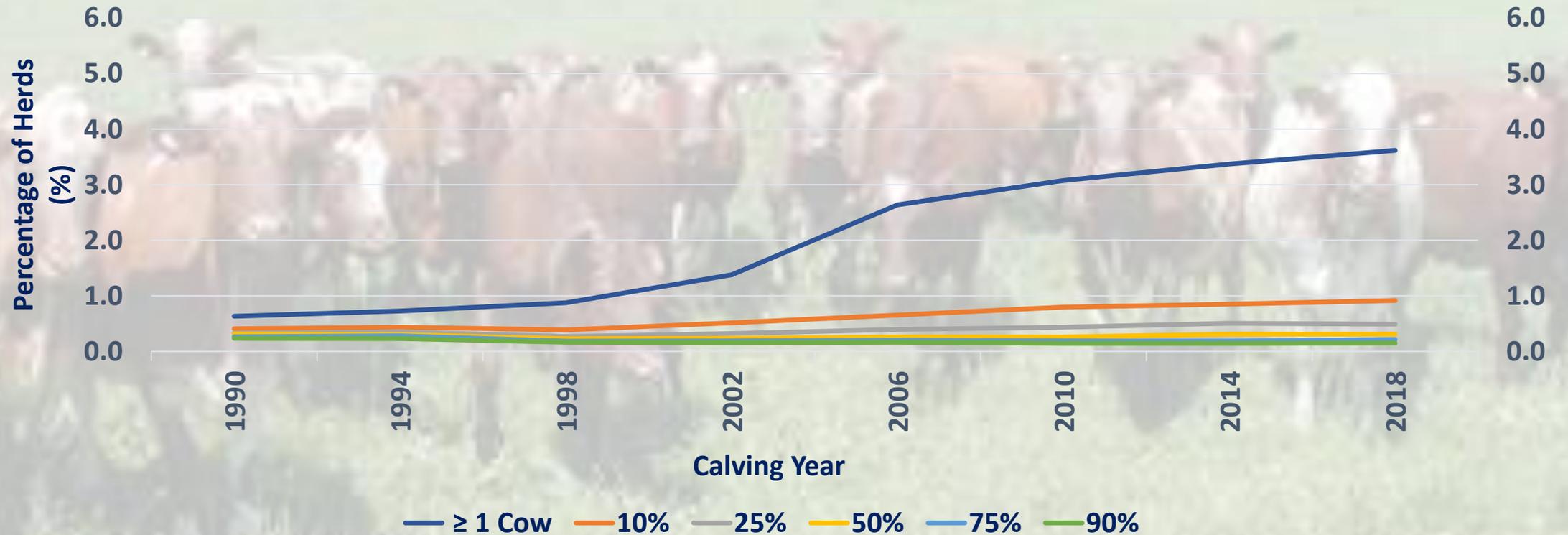
Breed Composition of DHI Herds by Year (Scale 6.0)

Guernsey



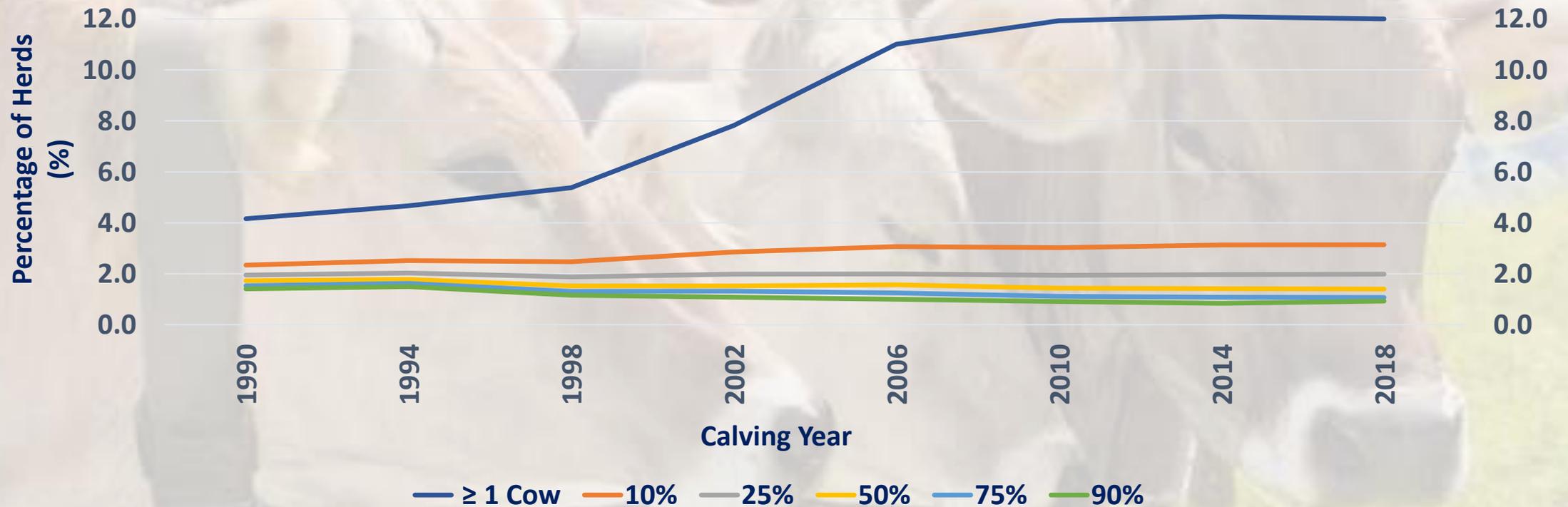
Breed Composition of DHI Herds by Year (Scale 6.0)

Milking Shorthorn



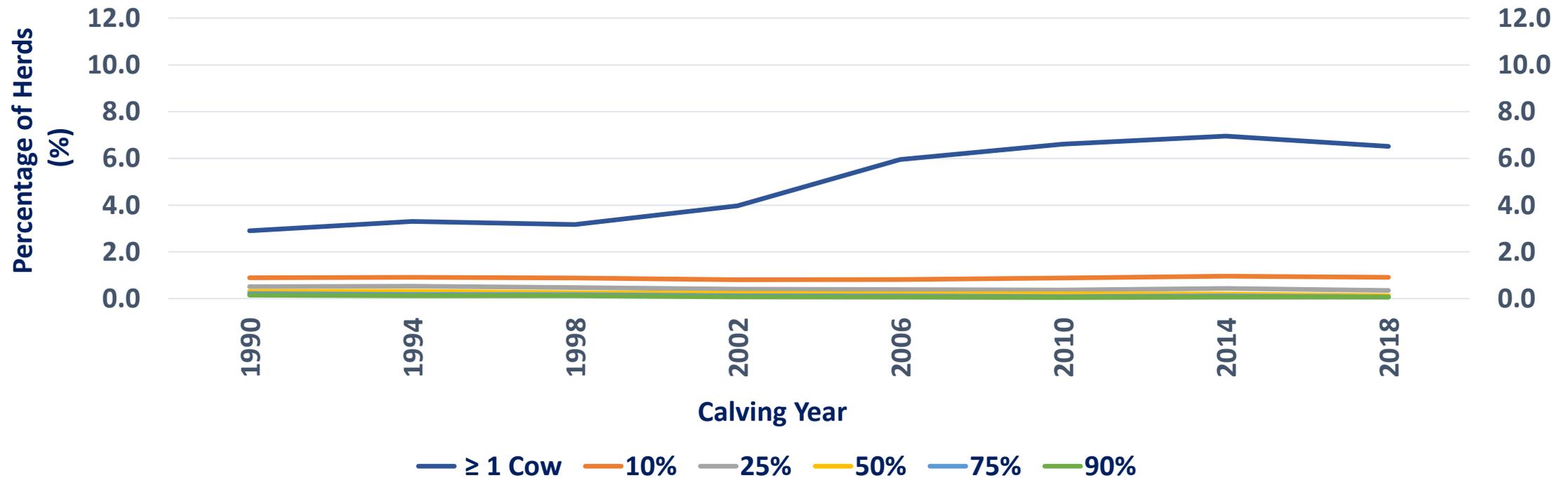
Breed Composition of DHI Herds by Year (Scale 13.0)

Brown Swiss

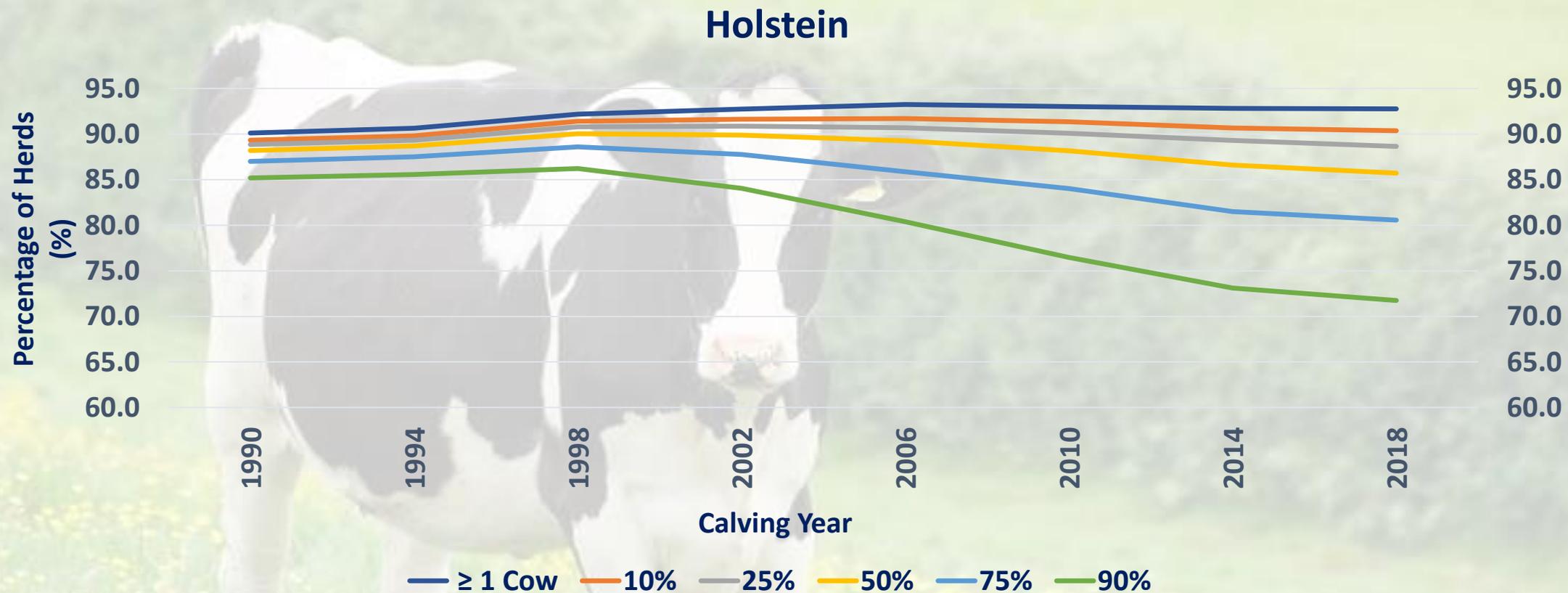


Breed Composition of DHI Herds by Year (Scale 13.0)

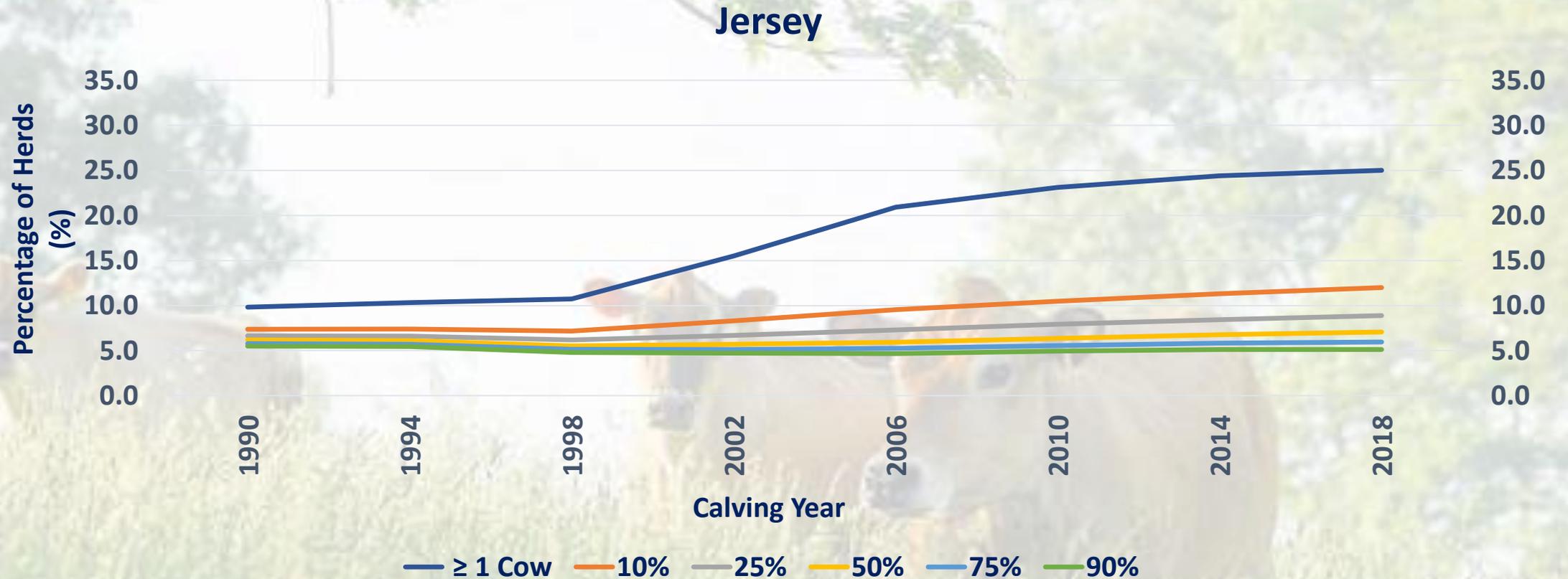
All Other Breeds



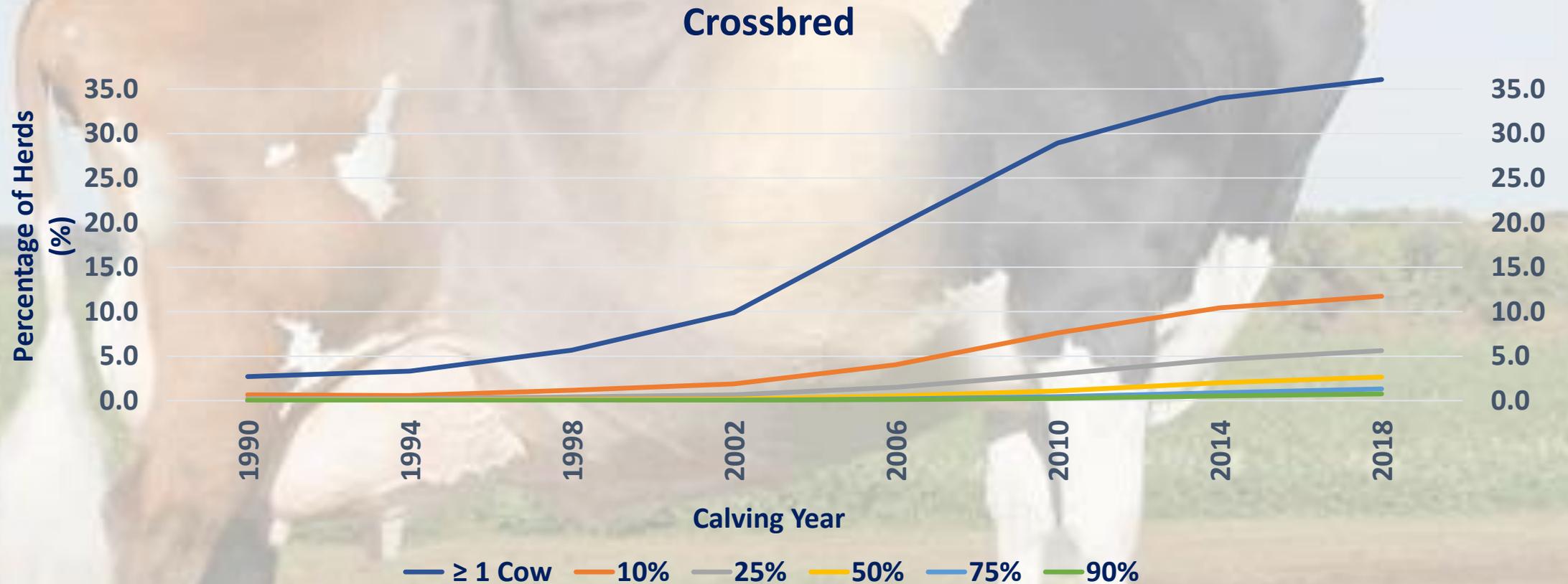
Breed Composition of DHI Herds by Year (Scale 37.0)



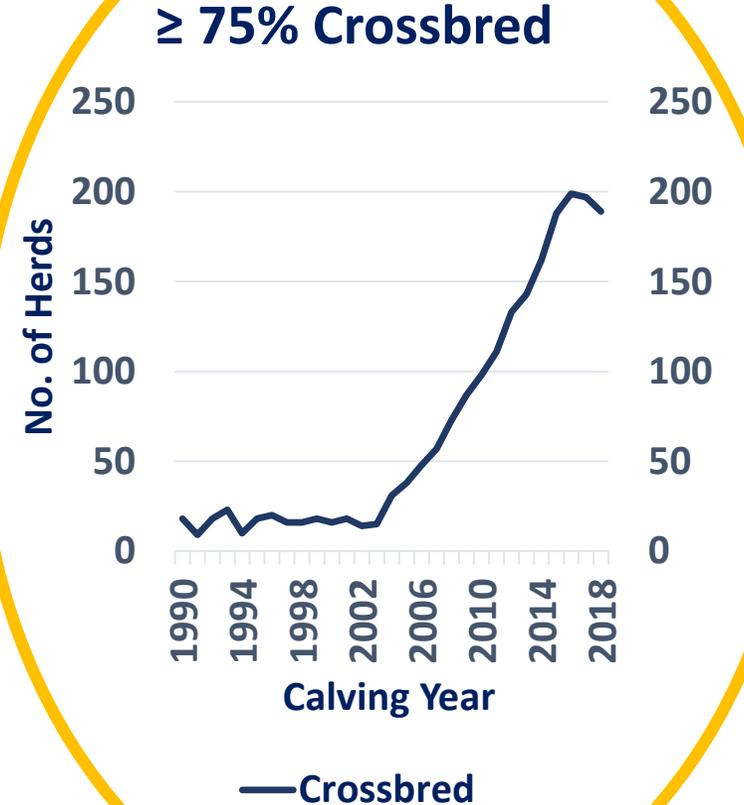
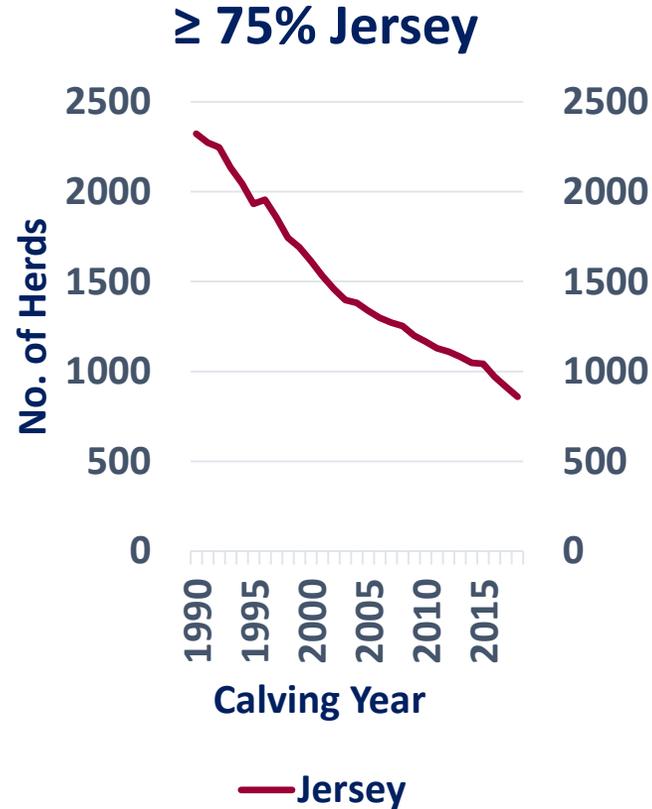
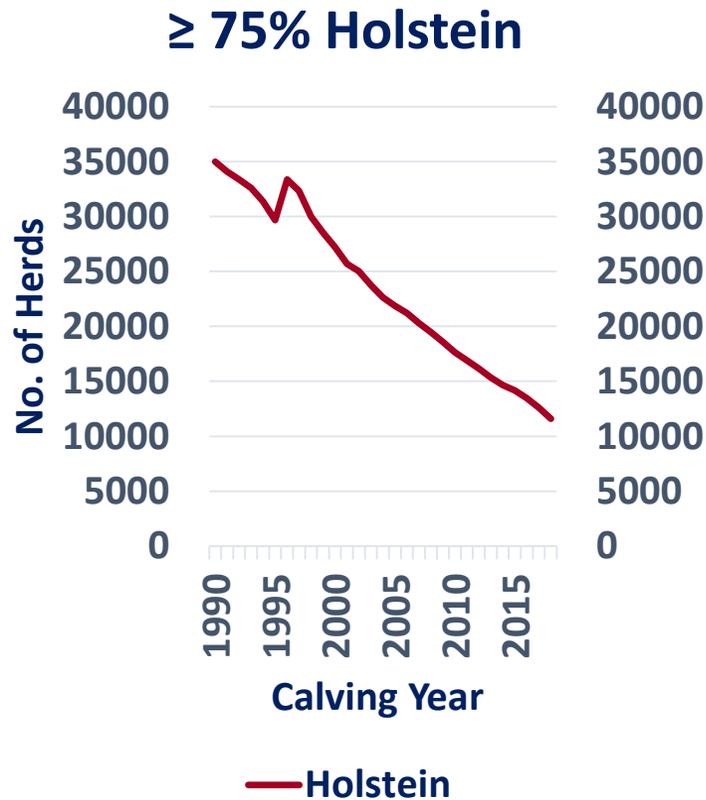
Breed Composition of DHI Herds by Year (Scale 37.0)



Breed Composition of DHI Herds by Year (Scale 37.0)



Breed Composition of DHI Herds ≥ 75% Threshold

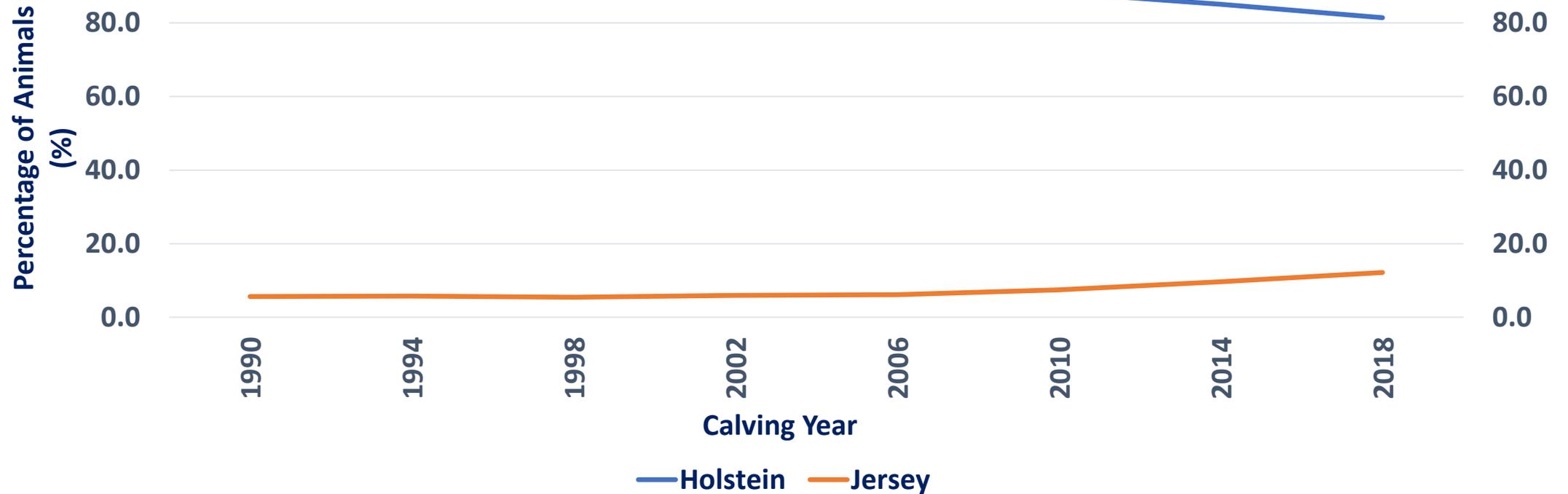


Breed Composition of DHI Cows



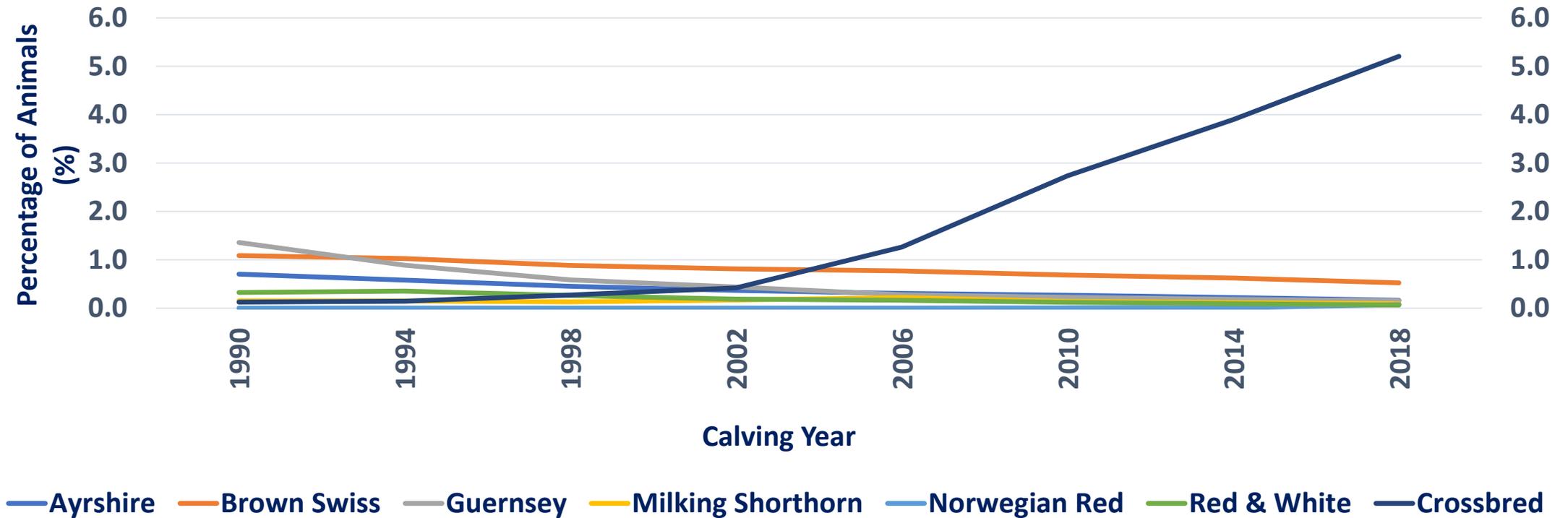
All DHI Cows Holsteins & Jerseys

Breed Composition Holstein & Jersey (%)



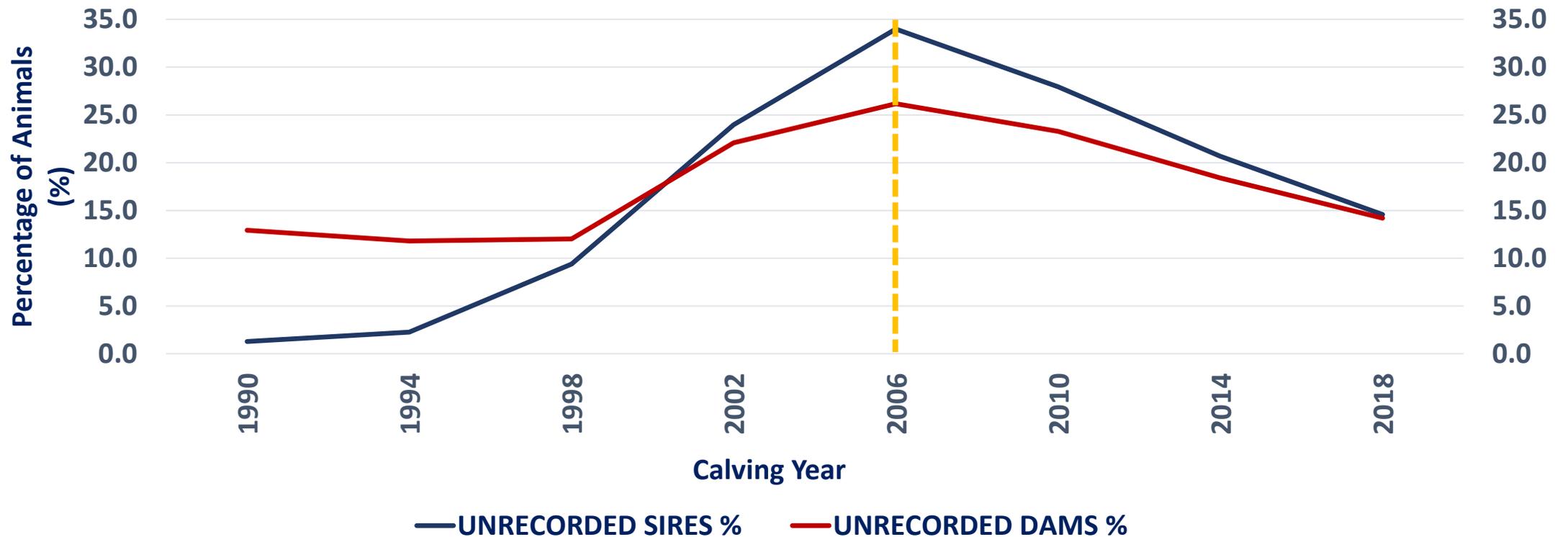
All DHI Cows of Other Breeds

Breed Composition (Excluding Holstein & Jersey) (%)



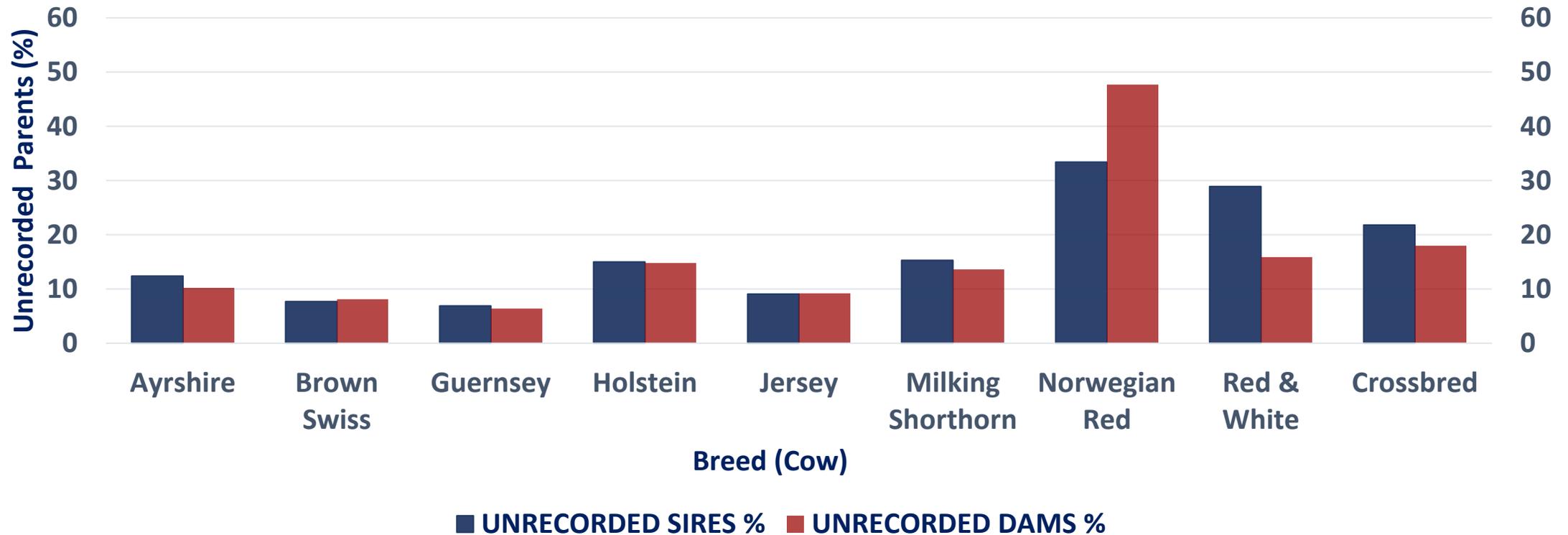
UNRECORDED Sires & Dams of All Cows

Unknown Sires & Dams of All Cows (%)



Unrecorded Sires & Dams of Individual Breeds in 2018

Unrecorded Parents in 2018

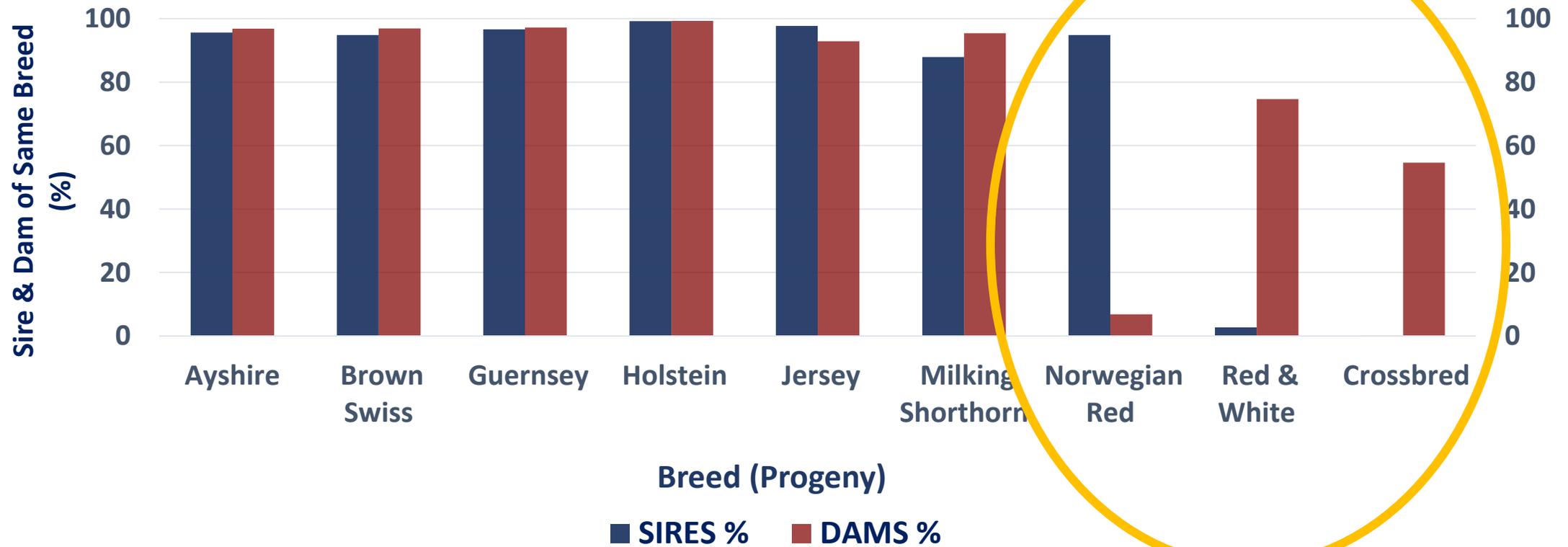


Individual Breeds Sires & Dams

- Investigated the parents of each breed
- Graphed parents ($\geq 0.1\%$) in 2018
- Interesting results for Norwegian Red and Red & White
- Crossbred discussed in next section

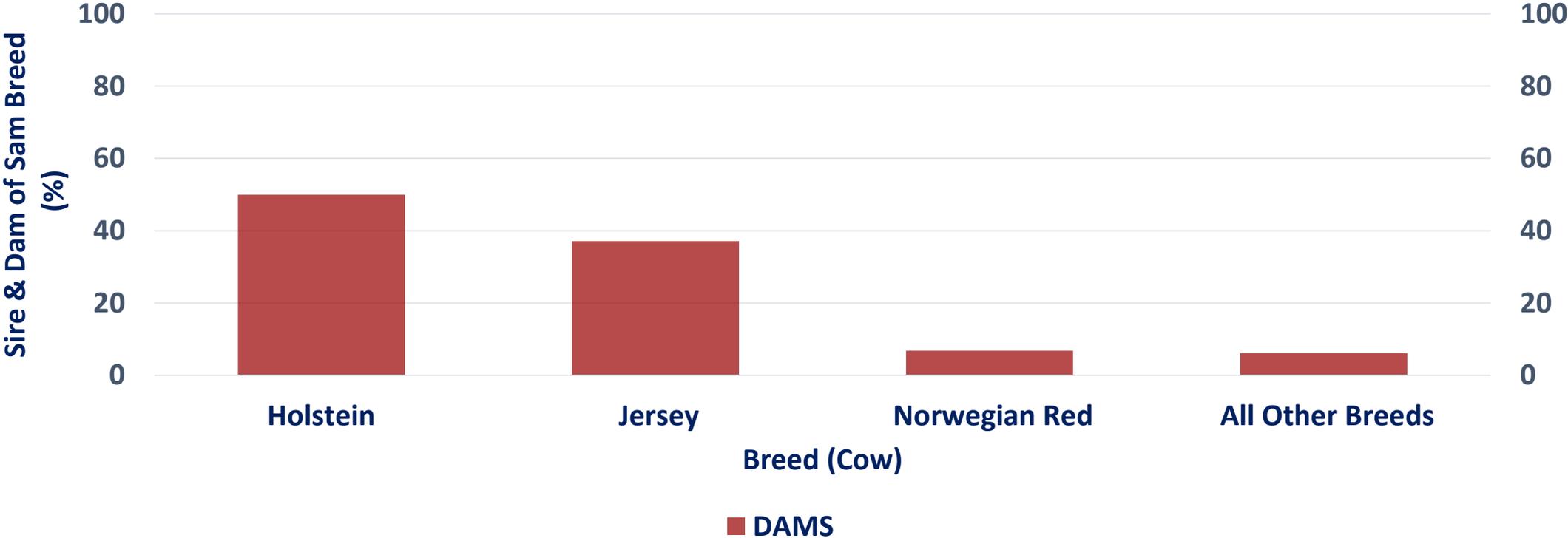
Parents with same breed as progeny in 2018

% of Sires and Dams of the same breed as progeny in 2018



Dam Composition of Norwegian Reds' 2018

Dam Composition of Norwegian Reds' in 2018



Sire Composition of Red & Whites' 2018

Sire Composition of Red & Whites' in 2018

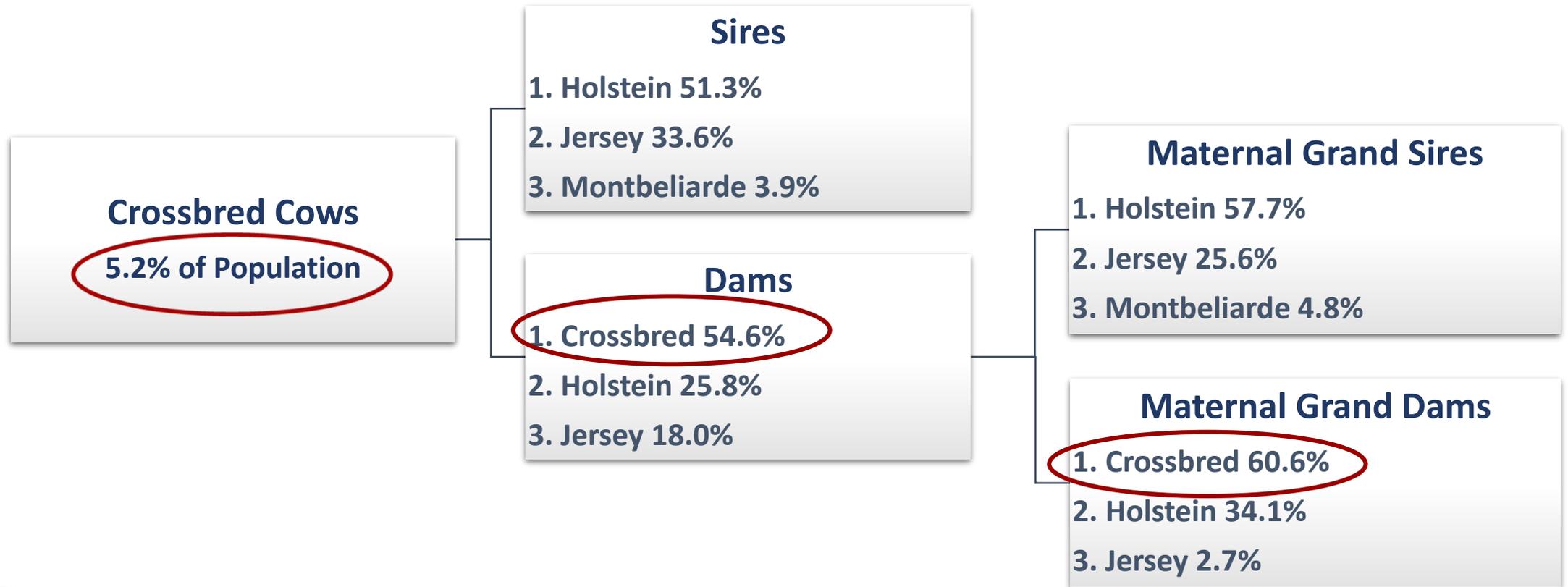


**Crossbred -
5.2% of
Population**



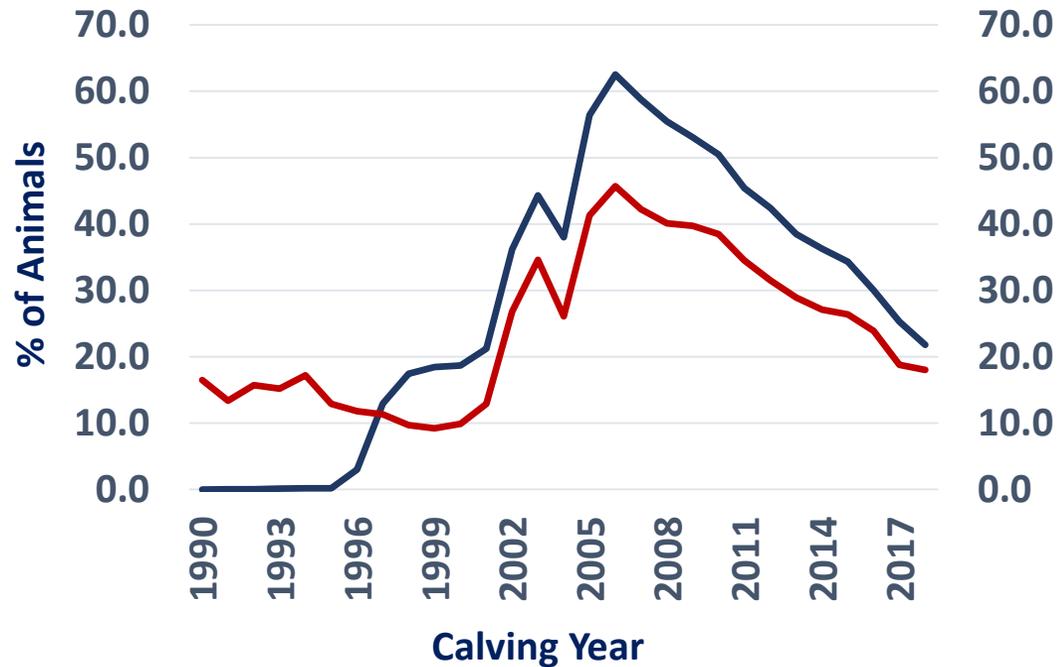
Crossbred Summary

2018



Sires & Dams of Crossbreeds

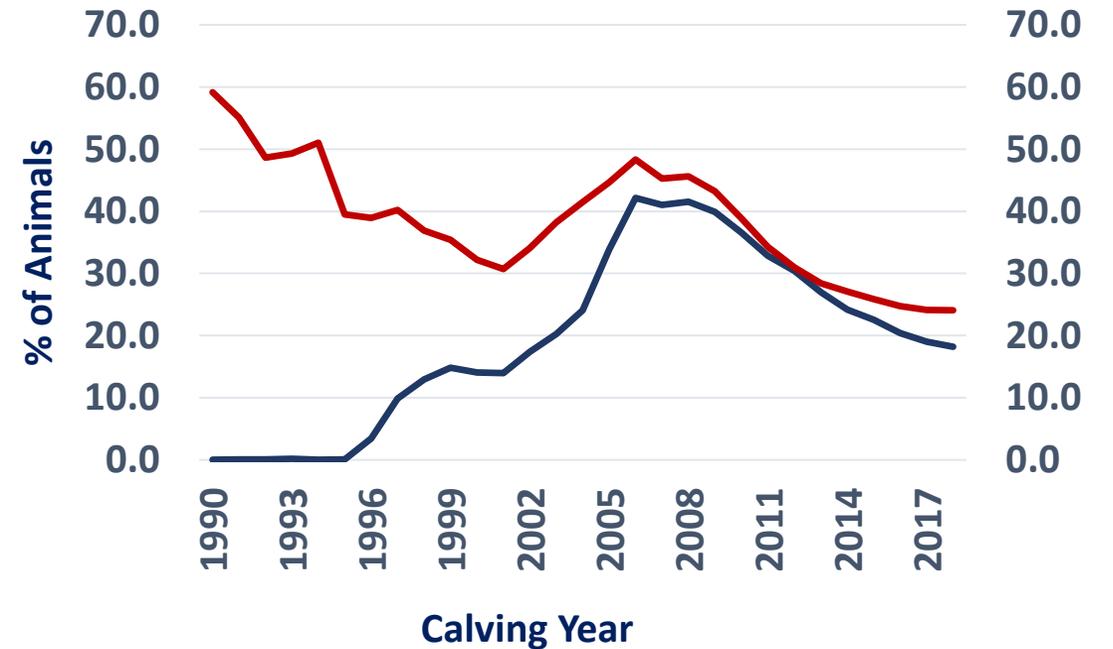
Unrecorded (%)



— UNRECORDED SIRES % — UNRECORDED DAMS %

Maternal Grand Sires & Dams of Crossbreeds

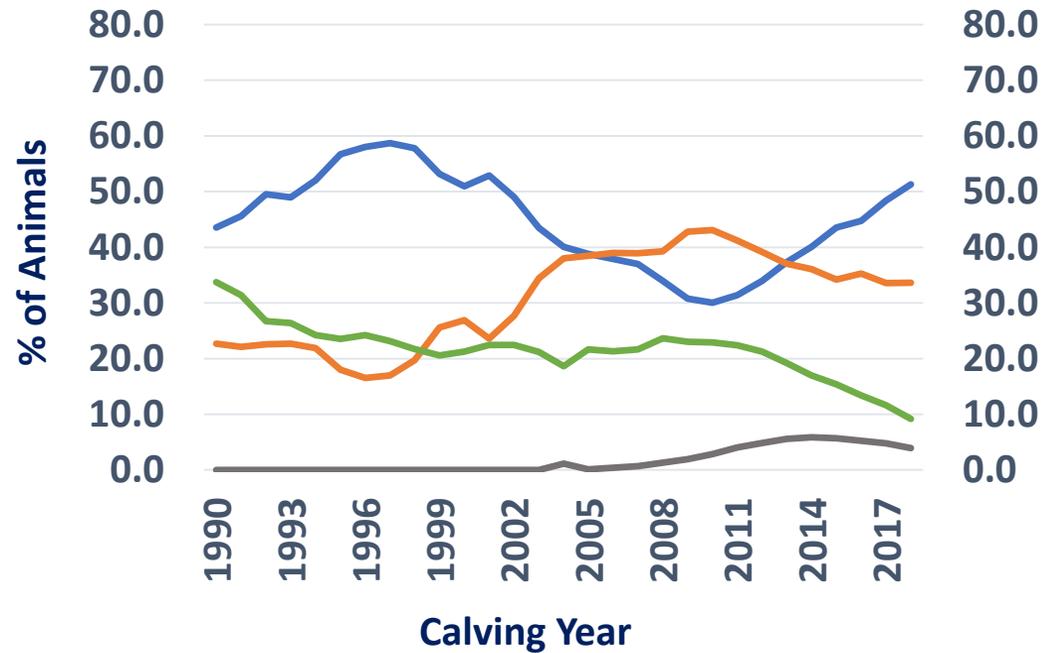
Unrecorded (%)



— UNRECORDED MATERNAL GRAND SIRES %
— UNRECORDED MATERNAL GRAND DAMS %

Sires of Crossbreds

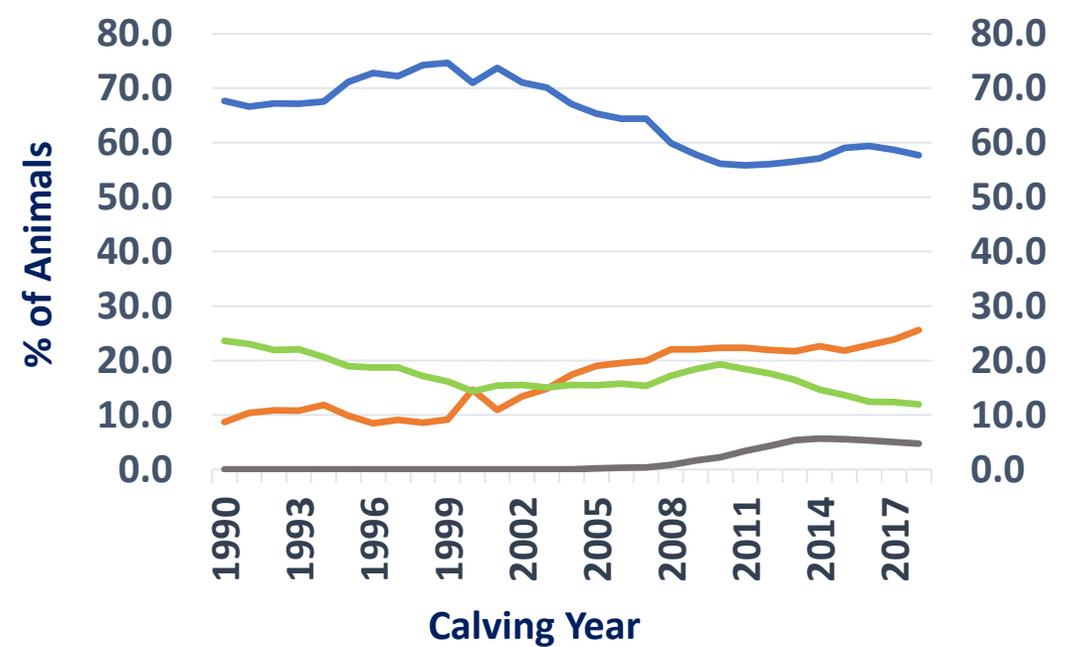
Sires (%)



— Holstein Sires — Jersey Sires
 — Montbeliarde Sires — All Other Sires

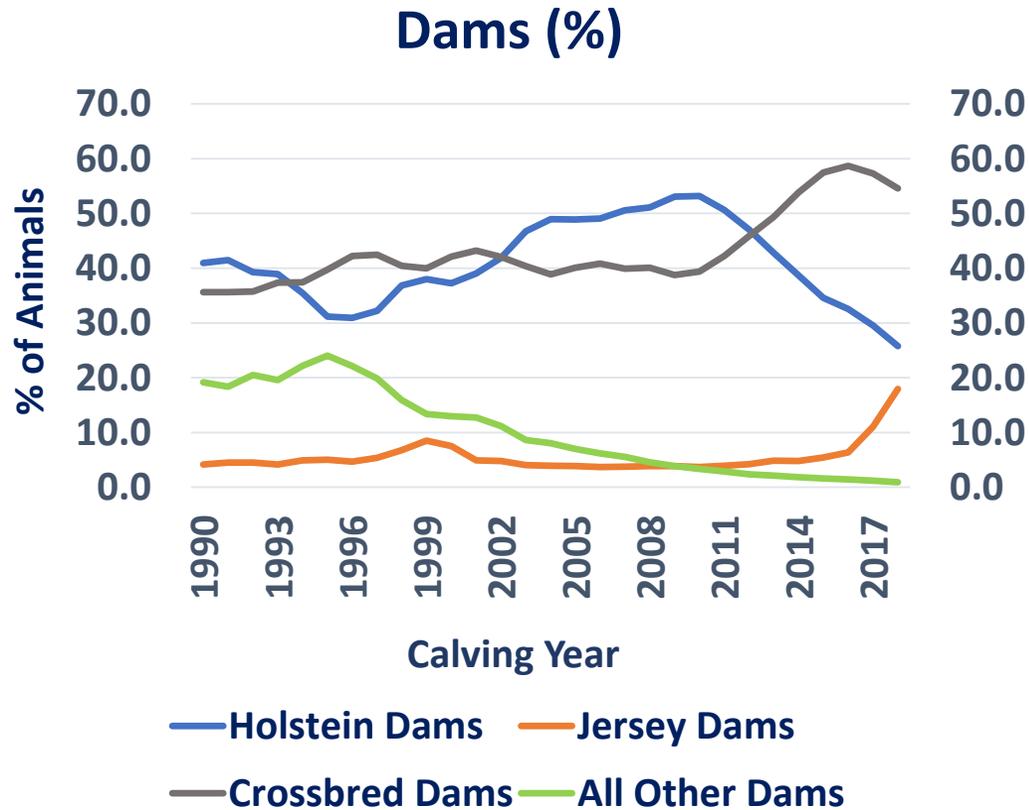
Maternal Grand Sires of Crossbreds

Maternal Grand Sires (%)

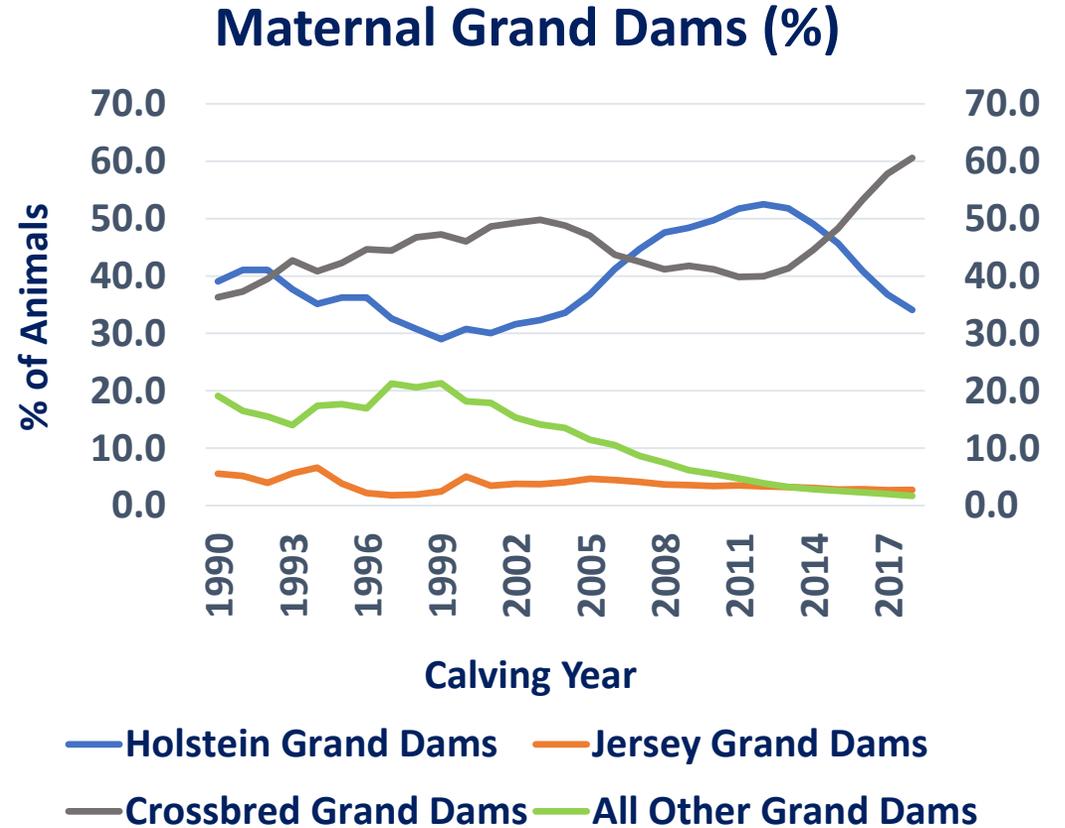


— Holstein Grand Sires — Jersey Grand Sires
 — Monbeliarde Grand Sires — All Other Grand Sires

Dams of Crossbreds



Maternal Grand Dams of Crossbreds



Acknowledgements

- Participating dairy producers for supplying pedigree and lactation data
- Dairy Herd Improvement organizations (DHIs) and Dairy Records Processing Centers (DRPCs) for processing and relaying the information to the **Council on Dairy Cattle Breeding (CDCB)**
- Purebred breed associations for providing pedigree data

Acknowledgements

- <https://hoards.com/article-2041-what-breeds-make-up-the-national-herd.html> (Crossbred cow for Hoards)
- <https://www.flickr.com/photos/iam/4706853263> (Ayrshire cow)
- <https://www.worldguernseys.com/the-current-position-of-the-guernsey-breed> (Guernsey cows)
- https://en.wikipedia.org/wiki/Dairy_Shorthorn#/media/File:Milking_shorthorns.JPG (Milking Shorthorn cows)
- <https://culturecheesemag.com/farm-animal/brown-swiss-cows> (Brown Swiss cows)
- <https://www.wideopenpets.com/everything-need-know-holstein-cow/> (Holstein cow)
- <https://www.progressivedairy.com/topics/people/prigel-family-creamery-plays-african-serengeti> (Jersey cows)
- <https://metro.co.uk/2009/12/09/holy-cow-calf-born-with-divine-sign-on-head-623427/> (Crossbred calf)
- <https://www.askideas.com/cow-closeup-face-funny-picture/> (Funny cow)



**THANK YOU FOR
YOUR ATTENTION!**

QUESTIONS?

CDCB
COUNCIL ON DAIRY CATTLE BREEDING