



# Beef on Dairy Indexes

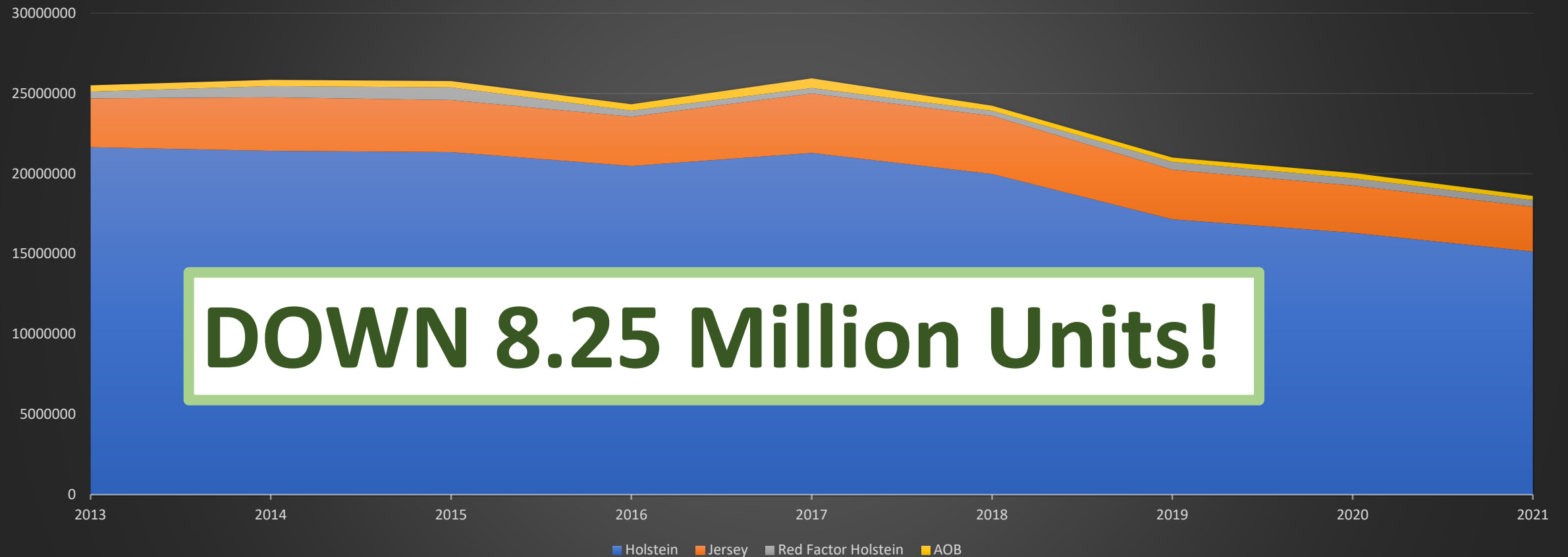
We can do more.

# A simple reminder regarding semen numbers...

Using domestic sales and custom collection numbers from NAAB.

# Combined Dairy Domestic Sales & Custom

Total Dairy Semen - Dom Sales & Custom Collect

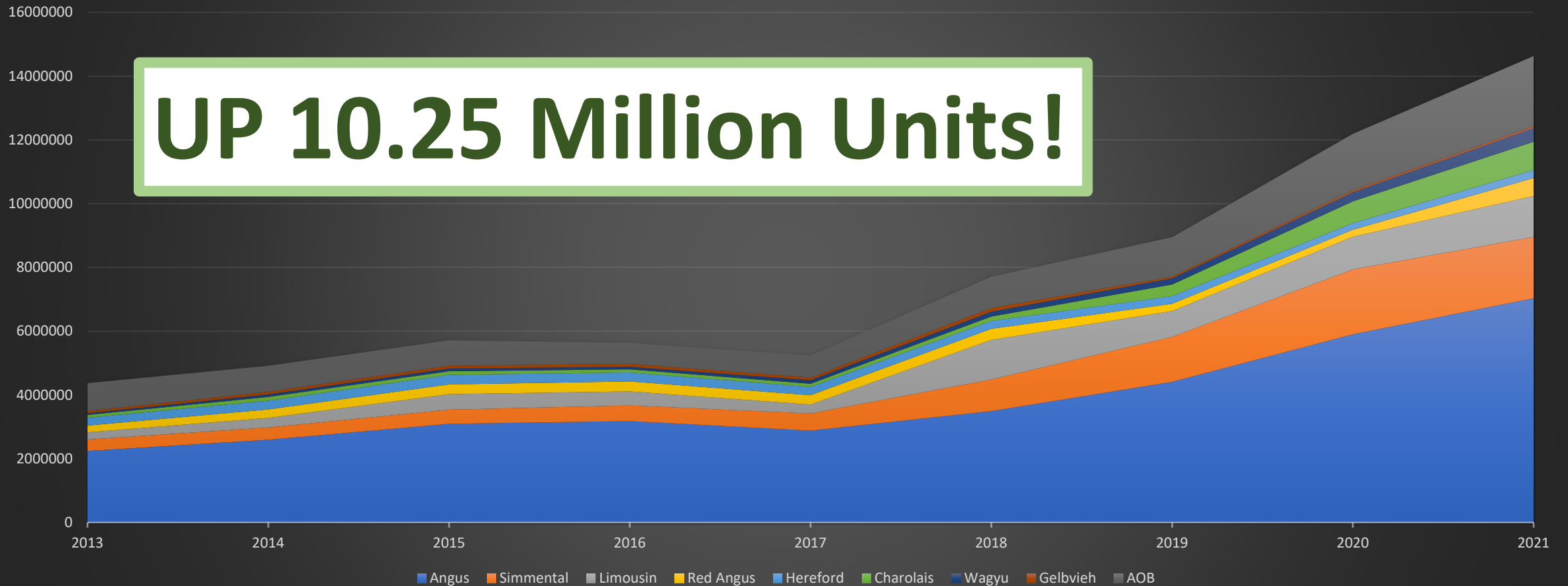


**DOWN 8.25 Million Units!**

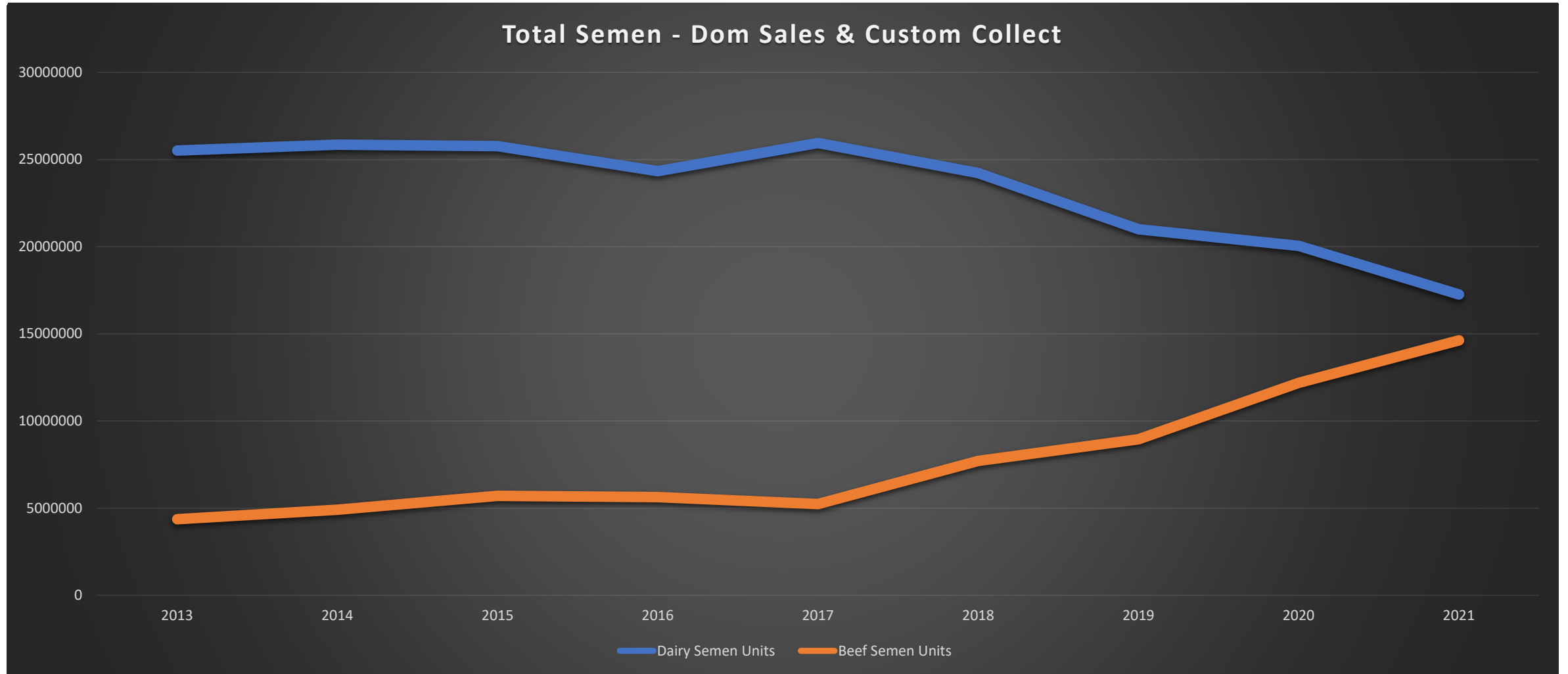
# Combined Beef Domestic Sales & Custom

Total Beef Semen - Dom Sales & Custom Collect

**UP 10.25 Million Units!**

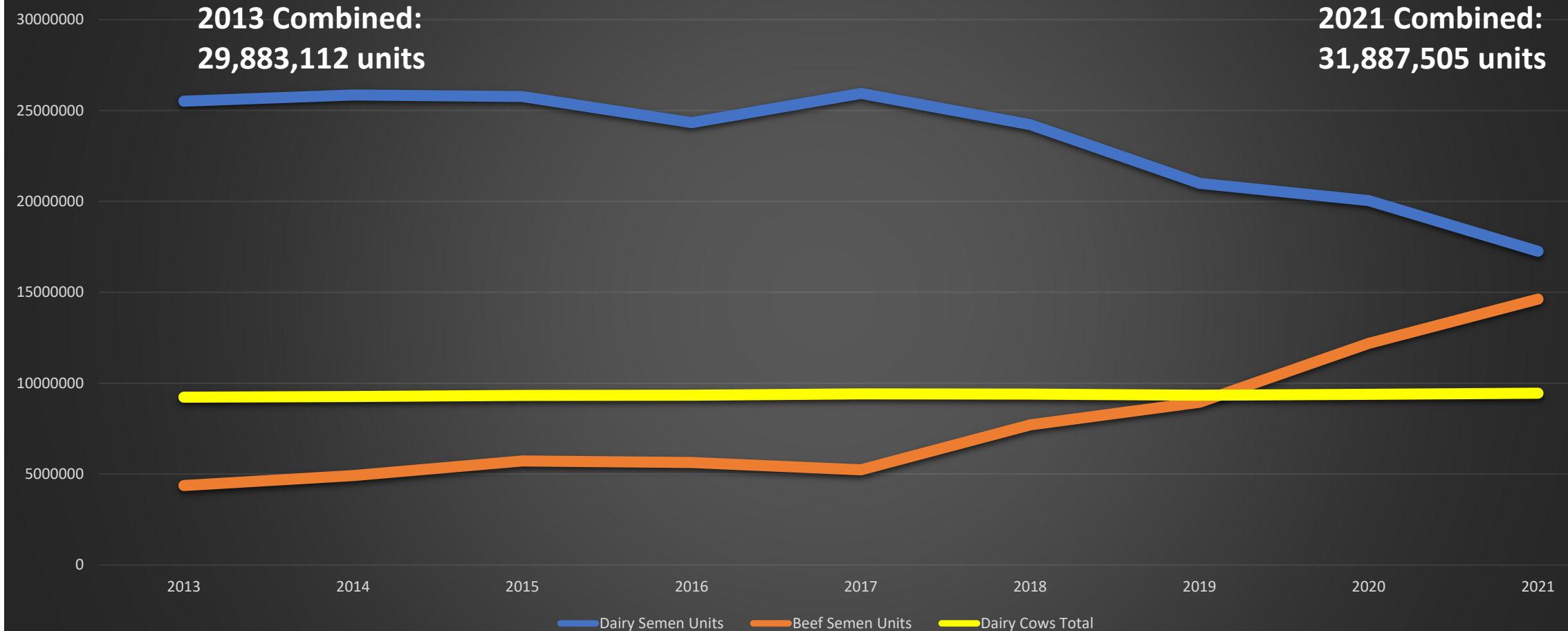


# Dairy and Beef Semen Trendlines



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Total Semen - Dom Sales & Custom Collect



# It is simple. To predict appropriate sires we need...

- **Pedigree**

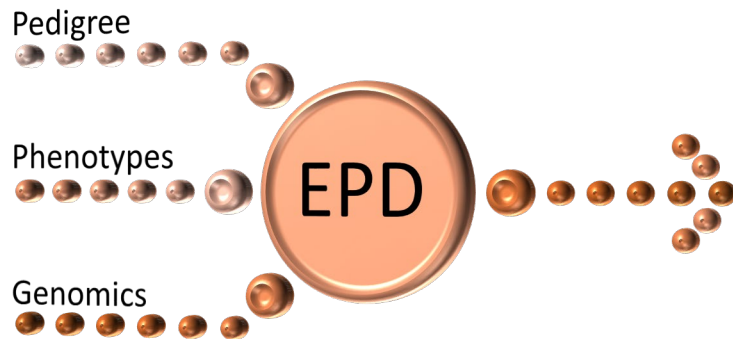
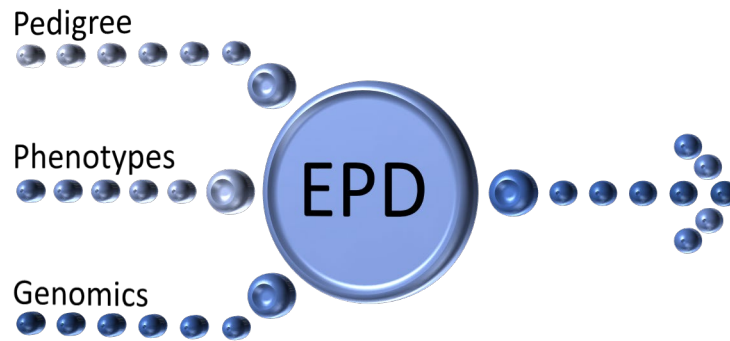
- Pros: Readily accepted. “Brand” Recognition
- Cons: Easy to falsify or error. Assumes all progeny receive same genetic info.

- **Phenotypes (Performance Records both individual and related animals)**

- Pros: In most cases are easily understood. Readily comparable.
- Cons: W/o appropriate contemporary grouping comparisons have little meaning

- **Genomic Information (DNA)**

- Pros: Inexpensive relative to many phenotypes. Readily accessible. Readily comparable. Have greatest impact when done on whole contemporary groups.
- Cons: “Cherry Picking” of data. DNA is confusing. Not a silver bullet!



**INDEX**  
The Gold Standard

The semen company should source BxD sires with:  
1) Appropriate & Honest Breed Complementarity  
2) Robust, Credible Indexes





**BEEF**  
**INFOCUS™**

**ANGUS**

**THE BUSINESS BREED**



**SimGenetics**  
PROFIT THROUGH SCIENCE

*American Simmental Association*

# History on first association generated BxD index

- Early 2018 – BxD knowledge was very minimal.
- IGS was asked to assist a group trying to solve the dilemma of identifying the appropriate Beef sire for Holstein operations.
- Group included:
  - Major packer (who provided carcass metrics)
  - Feedlots heavily vested in dairy cattle
  - Dairy Operators
  - Seedstock Producer
  - Various association group personnel
- Came to agreement that most important phenotypes were: MB, REA, Size, CE.
- Queried the entire IGS database to provide a view of what breed types fit.



# The Answer was Clear

- Searched IGS database (and the second largest beef database) for sires in:
  - Top 25% REA, MARB, CE, Mid level YW & CW
- Results:
  - 3.125% were straight British
  - 6.25% were straight Continental
  - 90.6% were Composite bulls that were a mix of British & Continental
  - 89.75 of the Composite bulls were SimAngus sires

**No single beef breed has been selected to solve all the terminal concerns presented by the Holstein female...**

# **Composite Sire Lines**

But, clearly...

Limitations exist to a threshold approach.

We needed something more sophisticated.

Current approach  
starts with the...



**Feeder Profit**  
**CALCULATOR™**

# The FPC as a foundation for HOLSIm index

- All homo polled & homo black 3/8 to 3/4 SimAngus bulls.
- FPC ran on a Holstein cow base with high health calves.
- Provided a profit prediction from all of those potential matings.
- Then added curvilinear adjustments to the FPC results for:
  - REA
  - Body Length
  - Calving Ease
- HOLSIM has slightly stronger raw correlation with API than TI.
- **ASA is presently working towards public Beef x Holstein and Beef x Jersey indexes.**

<https://www.holsteinusa.com/holsim/index.jsp>

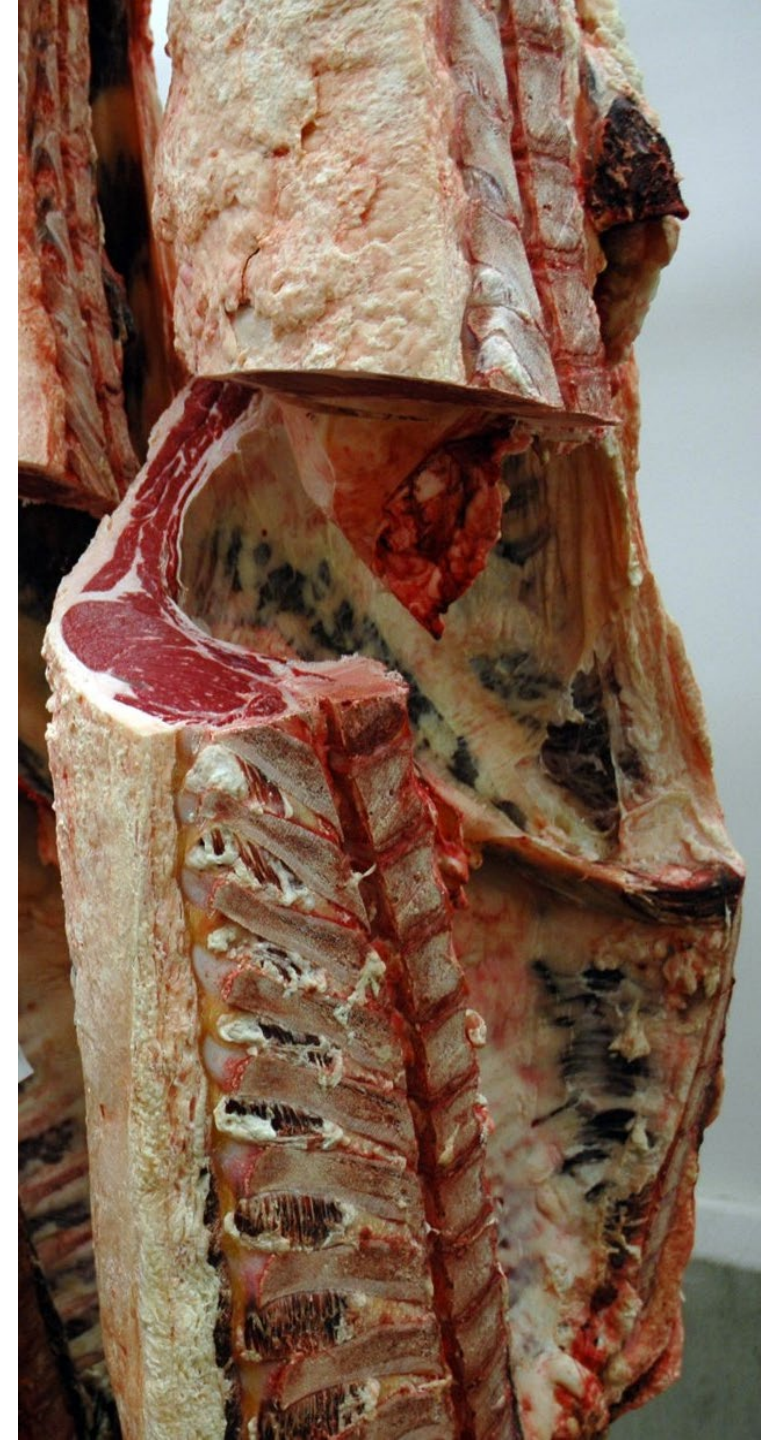
# Sure. IGS is doing this.

- Bringing in roughly 30,000 pedigreed BxD carcass records/year into the IGS database. Adding strategic genomic work on to those going forward.
  - Phenotypes, Phenotypes, Phenotypes
  - “In an era of cheap genotypes, phenotype is still king.” Dr. Mitch Abrahamsen
- We are currently generating EPDs for terminal traits for Holstein and Jersey individuals. Along with Holstein x Jersey composites.
- **SOON:** IGS Beef X Holstein & Beef x Jersey Indexes.
- Dairy herd whole lifecycle indexing.



# So, here is what we know.

- Our current Beef on Dairy indexes are significant advancement over mere four years ago.
  - Appear to better identify right sires and breed types
- Question, how long will the economic assumptions within those indexes accurately predict value differentiation in BxD carcasses?
  - The need for novel trait development
- Or do they even now?
  - In adequacy of USDA Yield Grade equation to predict RMY in BxD
  - Disproportion economic impact of livers in BxD vs native beef



But, here is the truth. We all need...

- More Phenotypes
- Sustainable reporting structures
- Willingness to share



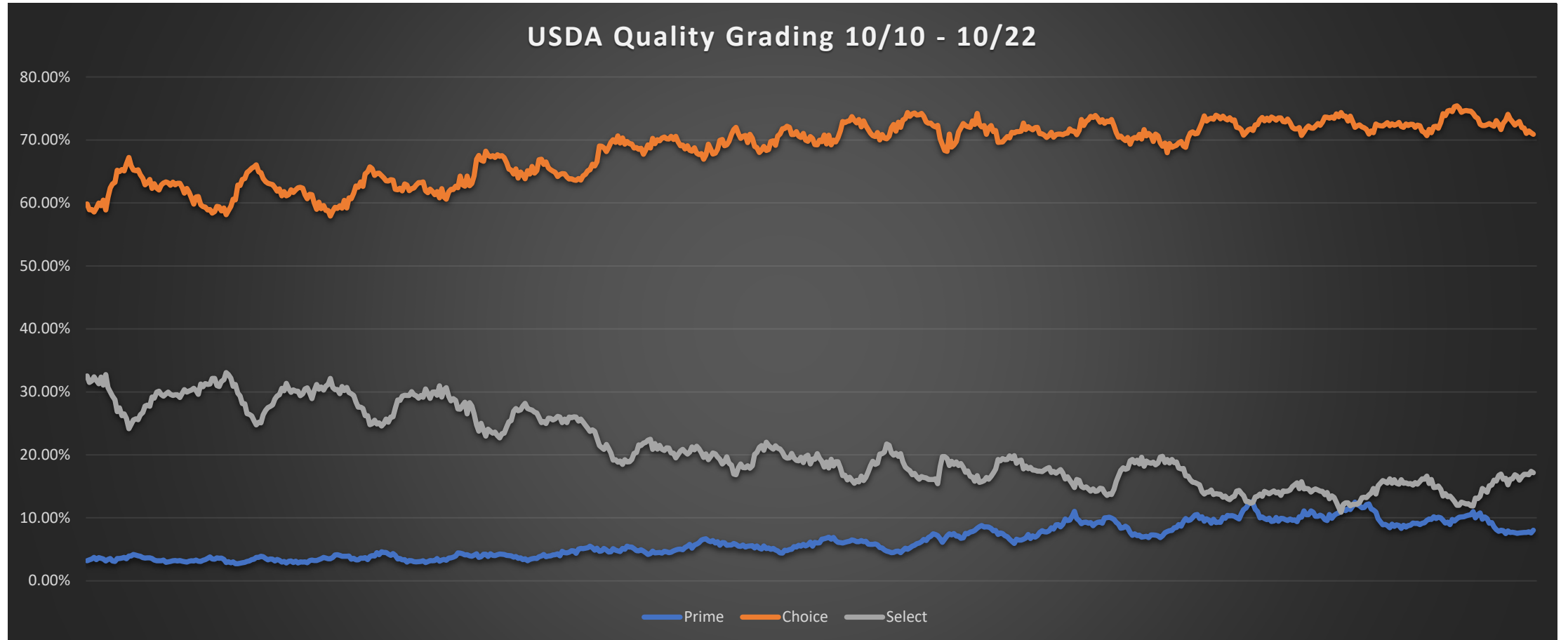
# Challenges on Farm

- Minimal public data
  - Silos and lack of cooperation
- Little male fertility work
  - What little there is not fit for eval
- Gestation length
  - Texas Tech study suggest 2 to 3d longer gestation length with BxD

# Opportunities on Farm

- Numerous groups collecting
  - Traditional & unique data sets
- Male Fertility - KState and TAMU
- With sufficient incorporation of Holstein and Jersey genetics into beef genetic eval the gestation length situation should become clear

# Packer feedback has impact



## Challenges in Feedlot and Plant

- Growth performance & efficiency
- Color/Markings vs. Program Regs
- **Liver Abscesses! Liver Abscesses!**
- **Inadequate measure of RMY**

## Opportunities in Feedlot and Plant

- Addressed through sire selection
- Sire selection and data feedback
- Clearly complex
- Packers aggressively seeking novel measures to more accurately value BxD carcasses

- 1) Liver Abscesses – Packer's primary discount.
- 2) Red Meat Yield – Industry lacks the ability to differentiate RMY and thus premiums & discounts are not credible/viable.

Dr. Dale Woerner, Texas Tech

- 1) Address liver abscesses – without the BxD will continue to be losers.
- 2) Regarding RMY – Breed them at least 50% Continental.

Dr. Scott Howard, Colorado State

# My contention

- Packers need answers.
- Genetic evaluation can contribute greatly to those answers.
  - *AND THEY KNOW IT!*
- BxD indexes will need to evolve if superior measures of RMY developed.
- It is conceivable that BxD indexes may need to include traits for liver health, male fertility, potentially heart health, etc.
- Phenotype Pipelines – if not now, then when?



*American Simmental Association*



[www.internationalgeneticsolutions.com](http://www.internationalgeneticsolutions.com)

**Chip Kemp**

**[ckemp@simmgene.com](mailto:ckemp@simmgene.com)**

**573-239-0524**