



Ultrasound Guidelines Council

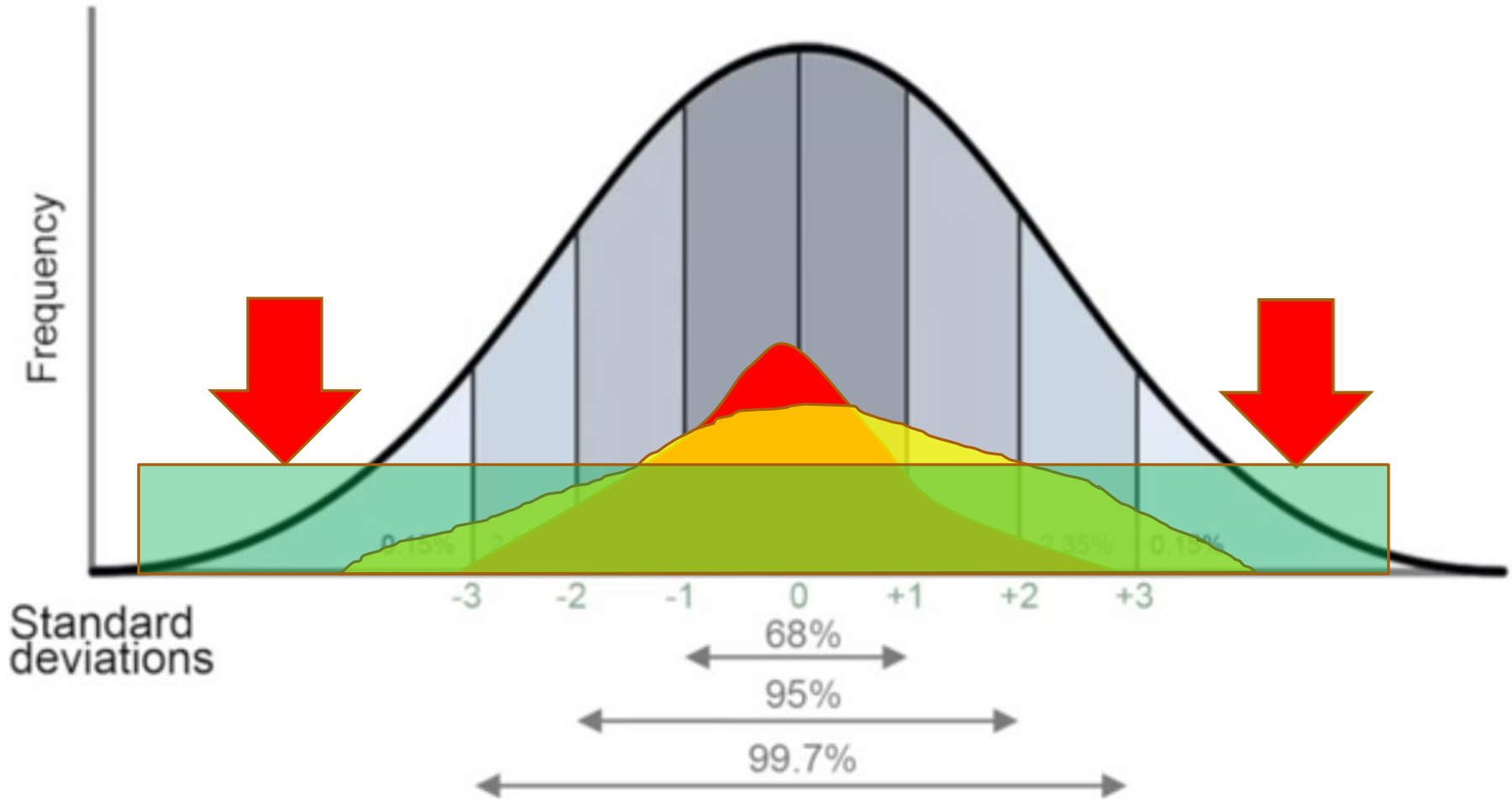
“THE ENDS OF THE BELL CURVE”

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JUNE 12, 2024

The Marbling Bell Curve

➤ Are we asking too much of an ultrasound machine?



The Research Trial

West Texas A&M University, Canyon, TX

❑ The Goals:

- ❑ Assess & Improve the accuracy of IMF models on 'extreme' cattle
- ❑ Gather more carcass & IMF data for newer technologies

❑ The Questions:

- ❑ Do we need breed or "type" specific IMF models?
- ❑ Accuracy on eared cattle?
- ❑ USDA Prime Cattle
 - ❑ Can we improve?
 - ❑ What are the limitations?

❑ Labs were given the IMF data.

- ❑ High IMF: Caviness Beef (Hereford)
- ❑ Low IMF: Tyson (Amarillo)



The Research Trial

Cost: ~\$24,000



High Marbling Group

- 33 Head (black & red hided, some Akaushi/Wagyu)
- 1 Low Choice, 1 Avg. Choice, 4 High Choice (18%)
- 18 Low Prime, 7 Avg. Prime, 2 High Prime (82%)
- IMF: 5.4 – 24.0% Avg.: 10.6%

Low Marbling Group

- 31 head (9+ Brahman/Brahman influence)
- 2 Euthanized, 1 no data
- 3 Standard, 12 Select, 9 Low Choice, 4 Avg Choice (46%)
- IMF: 0.8 – 5.9 Avg.: 3.1%

UGC Field Certification

- 77 Head (1 Prime, 59 Choice, 17 Select) Avg. IMF: 4.1%

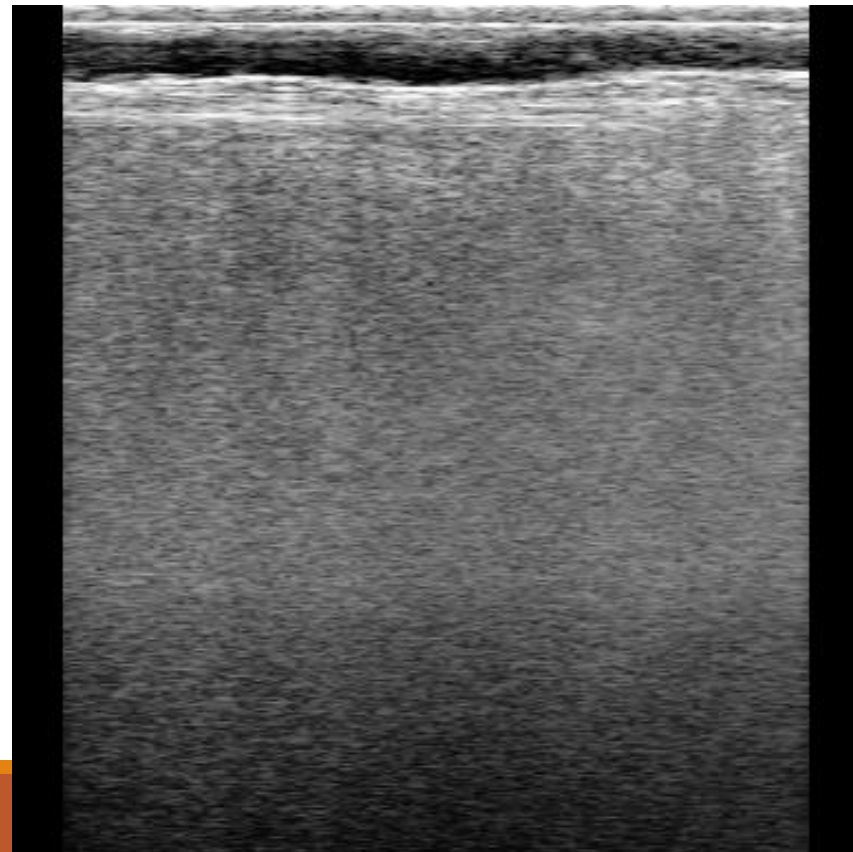
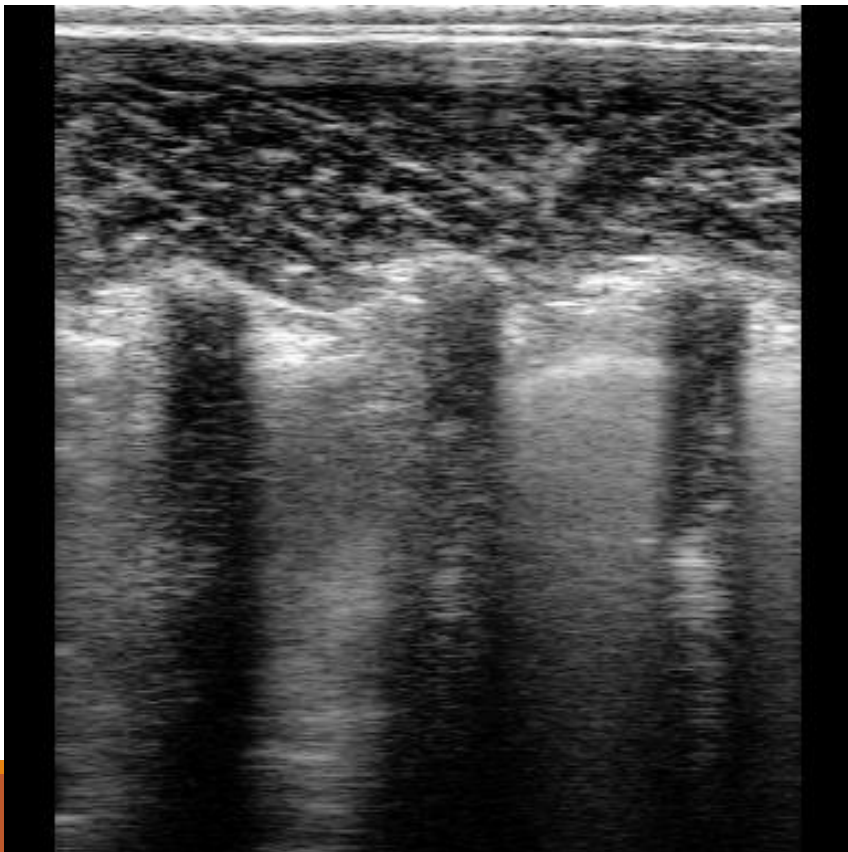
0.81% IMF



24% IMF



Same cattle. Exago machine.



The struggle with Fat & Prime



Ultrasound has limitations.

IMF% vs BMS, USDA and AusMeat grades

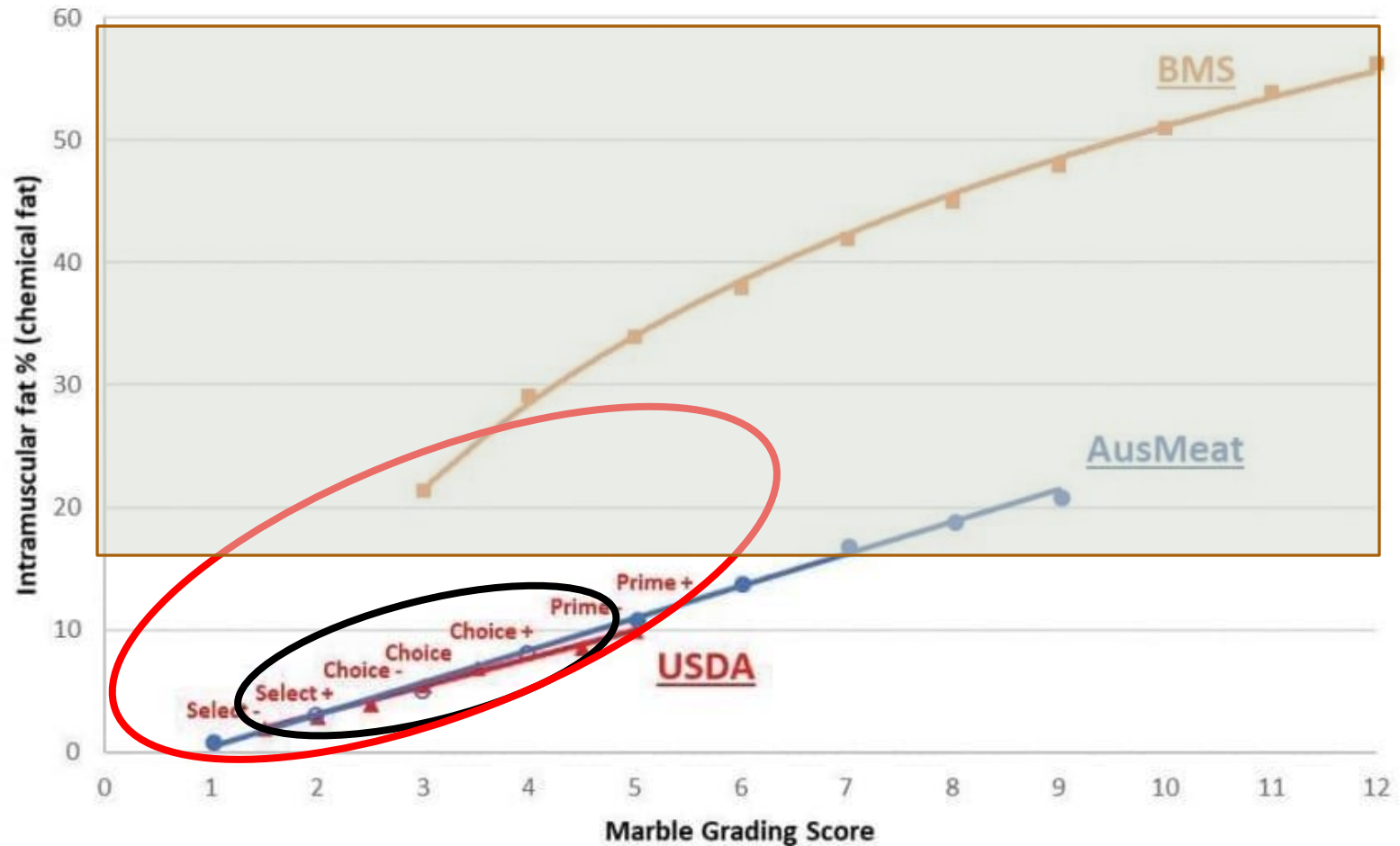


Figure 2: The relationship between Aus-Meat, USDA and JMGA (BMS) grading systems and actual intramuscular fat (IMF%).

What did we learn?

- ❑ Current IMF models do need to improve for 'extreme' high and low IMF cattle.
 - ❑ Labs have some data to do it, and updated IMF models will be ongoing.
 - ❑ ***This HAS...and WILL cause heartburn for breeders, especially low marbling cattle. Technicians are switching to newer technology.***
- ❑ Ultrasound should not try to accurately predict cattle above the USDA Grading system for marbling. There will be no REA data if we do.
 - ❑ High marbling breeds may need to consider opening younger age windows.
 - ❑ Breeds still need to avoid the maternal effect at weaning.
- ❑ Collecting IMF data is EXPENSIVE! UGC will continue to support the labs in this process.
 - ❑ Breed association research foundations may need to play a role.

Something to ponder....

- ❖ The industry is NOT scanning enough heifers. (~35%)
- ❖ Non-scanned females are 3+ years old and bred back before the mistake can be recognized.
- ❖ “Carcass cattle have a look.”
- ❖ Are we culling replacement heifers for phenotype at the expense of carcass progress?
- ❖ Can we scan heifers at or post-weaning?
 - ❖ Why do we care about the maternal effect?
 - ❖ Research: Creep feeding heifers is bad.
 - ❖ No testosterone effect. Prior to cycling behavior.
- ❖ Consider incentives for scanning heifers.





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