

Who owns the data?

- All ultrasound images are the property of the breeder owning the cattle at time of scanning.
- It is understood by the breeder that once the results are submitted by CUP to the breed association, that the association has the right to use the results in the same manner as other performance trait measures.
- CUP can store and maintain the images for an extended period of time.
- CUP can use data for research purposes.

What is the cost to the breeder?

- Typical prices for scanning seed stock animals vary between \$12 and \$16 per animal, including centralized processing.
- Prices vary depending upon the number of head, and the distance that a technician has to travel to the farm or ranch.
- All billing to the breeder for processing ultrasound measurements in CUP are handled through the technician.
- CUP directly bills technicians for each animal processed at Iowa State University.

CUP Points of Contact

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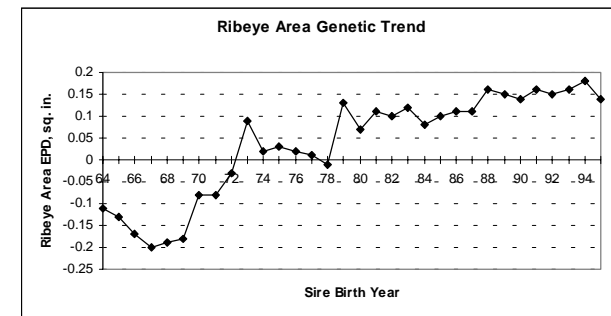
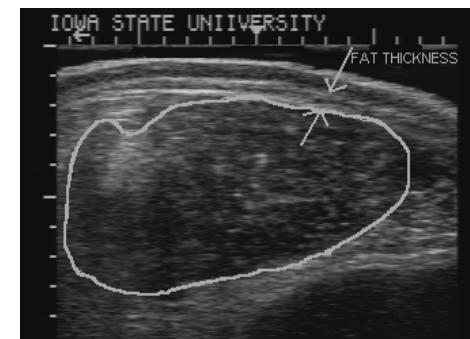
Doyle E. Wilson, Professor
Gene H. Rouse, Professor

Participating Beef Breed Associations

As of January 1999

American Angus Association
American Simmental Association
North American Limousin Foundation

Centralized Ultrasound Processing (CUP) In support of Beef Cattle Genetic Improvement



A service program of *Iowa State University* for the beef cattle seed stock industry and supported by beef breed associations

The USA beef cattle industry is faced with major challenges in attempts to stem the tide of declining beef consumption and concerns over meat quality and consistency. Solutions to these problems will be aided through national breed improvement programs for carcass merit. These programs have and will continue to use carcass data. Additionally, advances in real-time ultrasound technology and accuracy of compositional and quality evaluation using this technology will give breeders an even faster and less expensive means to improve carcass merit. There is no need to invest in long-term and expensive progeny testing programs as yearling seed stock animals can be measured directly to assess their individual genetic merit.

CUP Objectives

- To provide the seed stock industry with timely, accurate and unbiased measurements for fat thickness, ribeye area and % IMF (marbling)
- To assist breed associations in the accurate assembly of data required to generate adjustment factors and EPDs for carcass merit from ultrasound measures
- To provide education, training and operational assistance for ultrasound technicians working with breeders

Why centralized processing?

- Centralized processing requires standard protocols for image collection, consistency and accuracy in interpretation, cross checks on problem images and unbiased reporting necessary for carcass EPD calculations.
- Centralized processing requires complete and accurate identification and contemporary grouping records at the time of collection and processing so that the data can go immediately into carcass EPD programs.

How does CUP work?

- The breeder notifies the breed association of intentions to scan a contemporary group of animals.
- The breed association sends the breeder a barn sheet including information on the contemporary group.
- The breeder selects a technician from an approved list.

- The technician scans the cattle and submits the images to CUP for processing.
- The processing results are forwarded to the breed association by CUP for adding adjustment factors and computing within contemporary group ratios.
- The breed association sends the final results to the breeder.
- The breed association also includes the data into their national database for future calculation of carcass EPDs.
- Questions by the breeder after receiving the final results can be directed to the technician or back to CUP.

What does the seed stock breeder receive?

- Actual measures of rump fat thickness, 12-13th rib fat thickness, ribeye area and % Intramuscular Fat (marbling).
- Age adjusted measures (from the breed association).
- Contemporary group ratios (from the breed association).
- All images processed through CUP meet high standards required for calculating carcass EPDs.

Who are the qualified field technicians?

- Breeders can obtain a list of qualified technicians from their breed association.
- All technicians will have undergone and passed extensive training and testing by CUP personnel at Iowa State University.
- Most of the technicians will also have undergone other training and certification programs for beef cattle.
- Field technicians use only CUP approved standoff guides and ultrasound equipment.

What are the qualifications of CUP personnel?

- All CUP image interpreters are highly skilled personnel, having undergone extensive training and testing at Iowa State University.
- All CUP image interpreters maintain a high level of repetitive accuracy because of the volume of images interpreted and through periodic in-house proficiency testing.