CORNELL Cooperative Extension

Beef Cattle Carcass Ultrasound
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Collecting Real-Time Beef Carcass Ultrasound Data

As a beef cattle producer, you have now decided to have real-time carcass ultrasound data collected on your cattle. You may have several questions that need to be answered as to how to start this process such as what procedures you should do before the technician arrives, what age range of cattle is appropriate for scanning, what is the need for contemporary groups, what happens with the images after the technician scans the cattle, who interprets the images, and what will you receive from the interpreted data.

To begin the process, you should determine which animals to scan and the appropriate age the animals need to be when scanned. The ideal time to scan cattle is at 365 days of age. Due to the variation in calving dates within a herd, scanning age windows have been developed such that the data can be adjusted to yearling age. These ages vary among breeds, giving producers a "window" of opportunity for scanning and data collection. The following table lists the scanning age windows for various breeds: Always contact your breed association to receive the most current window of age for your particular breed.

Acceptable Scanning Ages

Breed	Yearling Bulls	Developing Heifers	Feedlot Steers and Heifers
Angus	320-440 days	320-460	320-460
Canadian Angus	320-440	320-460	320-460
Brangus	310-430	310-430	310-430
Braunvieh			
Charolais	320-430	320-430	320-430
Chianina	320-440	320-460	320-460
Gelbvieh	320-410	320-410	320-410
Hereford	330-530	330-530	330-530
Limousin	300-450	300-450	300-450
Maine-Anjou	330-440	330-440	330-430
Murray Grey			
Red Angus	320-440	320-460	320-460
Salers	330-450	330-450	330-450
Shorthorn			
Simmental	300-440	300-440	300-440
BIF Guidelines	320-410	320-410	320-410

Note: Breeds that are blank at this time have not reported their age range. Not all breeds have adjustment factors at this time, but data is being collected until enough cattle have been scanned to develop the adjustment factors.

With many breed associations developing body composition EPDs, they require that scanned animals be included in a well-defined contemporary group. A contemporary group includes all animals of the same breed and sex, born in a given calving season, reared and managed under similar conditions. An animal must be in a contemporary group with a minimum of two animals of the same sex for the data to be used in genetic evaluation. Many times contemporary groups are formed from the latest information recorded (weaning weights or yearling weights) and can be broken down further for particular management circumstances. Three day scan - animals that are scanned more than three days apart will be grouped separately. Appropriate age - bulls and heifers outside the age window will be placed in their own contemporary group. Group code - if animals are indicated as managed/fed differently, they will be placed in separate contemporary groups.

After determining the correct scanning time for your cattle and contemporary groups, contact your breed association and notify them of your intentions. The breed association will then send to you breed specific "barn sheets". The barn sheets will come listing the animals to be scanned and the appropriate management information, such as weaning weight, birth date, and registration number of calf, sire and dam. . The producer will need to write in the weight of each animal as it is scanned. For many breeds, weaning weights must be on file with the appropriate breed association before ultrasound data can be processed. In the case of unregistered cattle, or breeds that do not have their own barn sheets, a Centralized Ultrasound Processing (CUP) barn sheet will be provided by the technician. In addition to providing barn sheets, by contacting your appropriate breed association you will have the most current information required so that you can adhere to the guidelines adopted by your breed association to ensure image collection and interpretation goes smoothly.

Your particular breed association can also give you a list of Certified Ultrasound Technicians. In order for the scanned data to be accepted by most breed associations, ultrasound technicians are required to meet a set of minimum standards for image quality, data accuracy, and knowledge of ultrasound technology as determined by the Ultrasound Guidelines Council (UGC). Only images collected by a UGC "certified" technician can be used to calculate carcass ultrasound EPDs. After you have contacted the Certified Ultrasound Technician, they will refer you to their particular "Checklist and Tips" for collecting ultrasound data. (See Checklist and Tips Fact Sheet). The document discusses what you as a breeder needs to do before the technician arrives so that you are prepared for the scanning session.

After the Certified Technician has collected the ultrasound images he/she will send the zip disk containing the images, along with the barnsheets to a Certified Ultrasound Lab for processing. Once processed, the results will be forwarded to the particular breed association so that the data can be adjusted for age and for computing within contemporary group ratios. The breed association or lab sends the final results then to you, the breeder. The breed association also includes the data into their national database for future calculation of body composition EPDs.

If you have any further questions after receiving the final results you can contact the technician or lab.