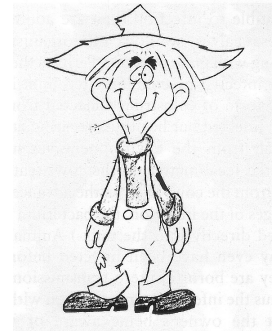


# Rancher Rob

by Wendy Belcher

*Rancher Rob and his cronies are fictitious characters (but the scenarios are real) created by the author.*

*Ultrasound replacement heifers - what sires to use to increase carcass EPD values on offspring.*



With the weather this winter being stupid cold, Rancher Rob has been going through a lot of straw to keep his cattle high and dry along with a lot of feed so they have the energy to stay warm. At minus 25 celsius this morning, that straw bed is vital to keep his herd bulls from freezing important equipment. After feeding and topping up the beds, Rancher Rob was grateful his cows won't be calving for another few weeks and decided to spend the day, catching up on some paperwork in the office.

With his annual bull sale less than two months away, Rancher Rob took this opportunity to email the Canadian Gelbvieh Association office a list of the bulls and replacement heifers that he needs Ultrasound Barn Sheets for when the Technician comes to the ranch. Rancher Rob's calving schedule runs from February 1 to mid April with a few stragglers. Since bulls can be scanned between 320 and 440 days of age, and heifers can be scanned between 320 and 460 days of age, Rancher Rob calls and schedules his Ultrasound Technician for mid to late February when his animals are in the correct age range.

Rancher Rob knows that ultrasound images help establish ultrasound based body composition expected progeny differences (EPDs) and that the collection of progeny carcass records is an important part of the genetic documentation of Gelbvieh cattle and whenever possible, Rancher Rob also submits actual carcass data on Gelbvieh feeder cattle. But more importantly, Ultrasound for carcass evaluation provides Rancher Rob (and his bull buyers) with an insightful tool to assess the relative carcass merit of potential seedstock animals. Ultrasound records from seedstock are highly related to the carcass characteristics of feedlot progeny.

By scanning his potential replacement heifers each year, Rancher Rob has been building up a cow herd with excellent carcass merit from which his herd bulls are created. Heifers often express greater differences in %IMF than young bulls due to lower testosterone levels. Heifers also provide the bonus of both a progeny and a replacement record. By scanning his replacement heifers, Rancher Rob actually collects a progeny record on his existing cows and the replacement females he keeps in his herd will start with their own performance record. By mapping out the carcass profile of his entire cow herd, Rancher Rob is able to selectively mate animals to directly target different breeding program goals for his customers.

Rancher Rob knows that ultrasound data cannot be directly compared between herds and is sure to let his bull buyers know that fact. He also understands that raw ultrasound data on individual seedstock animals is not informative since these animals are not raised on the same rations or management protocols as feeder cattle. This is why Rancher Rob makes sure his ultrasound scans are sent to the lab for processing.

Age adjusted ultrasound measures and the corresponding group rankings and indexes are however, very

informative. These values indicate the relative performance of animals within Rancher Rob's management system. As the heritability of ultrasound and carcass data is quite high, this information is very informative.

Ultrasound data contributes to the calculation of carcass EPD values. These EPDs are the only reliable way to compare the genetic merit of animals across herds and environments. The Canadian Gelbvieh Association provides carcass EPDs for CW (Carcass Weight), REA (Rib Eye Area), MB (Marbling), DtF (Days to Finish), CV (Carcass Value) and FM (Feedlot Merit). Seedstock use and markets will impact the type of EPD which should receive emphasis during the selection procedure. Sires being used in a terminal role (all offspring are sold as feeder animals) should place significant emphasis on carcass traits. Sires being used to produce replacement females will have less emphasis on carcass merit.

Rancher Rob's commercial bull buyers realize the value of carcass and ultrasound data in their sire selections. Commercial Charlie runs a mostly continental based cow herd. Every fall he sells his feeder calves to the same feedlot which appreciates the care he takes to produce high yielding animals. He focuses some of his selection criteria on bulls with higher MB EPDs and IMF ultrasound scores to increase the marbling in his feeder calves. British Bob on the other hand runs a mostly British based commercial cow herd and looks for bulls with higher CW & REA EPDs and larger REA ultrasound measurements.

**CGA Guidelines for Submitting Ultrasound Carcass Information**  
***Official Ultrasound Barn Sheets must be requested from the CGA.***

The Canadian Gelbvieh Association is currently gathering ultrasound carcass information to assess the probability of generating EPDs for carcass traits from ultrasound data. For your ultrasound data to be included in an CGA ultrasound evaluation, the following guidelines must be met:

1. Ultrasound data must be processed through Centralized Ultrasound Processing (CUP) facility at Iowa State University;
2. CGA has no official requirements regarding ultrasound equipment, provided the technician is APTC certified and can generate the required ultrasound information;
3. All animals must be on file (registered or computed) with the CGA prior to submitting ultrasound data to the CGA;
4. Data must be submitted to the CGA on official CUP Gelbvieh Barn Sheets obtained through the CGA. Contact the CGA for more information or to request a barn sheet;
5. Ultrasound Data Required:
  - a. Percent IMF - intramuscular fat (0.00 %),
  - b. Ribeye area (00.0 sq. inches),
  - c. Rib fat thickness (0.00 inches),
  - d. Rump fat (0.00 inches);
6. In addition to actual ultrasound data, CGA requires the following information:

- a. CGA registration number of each animal,
  - b. Date scanned,
  - c. Actual weight on the date scanned,
  - d. Technician name (must be certified),
  - e. Ultrasound equipment used;
7. Make sure cattle are within the proper age range. Ultrasound carcass data must be collected between 320 and 440 days of age (same date range as yearling data). For convenience, you may want to schedule ultrasound data collection for the same date when other yearling data is collected. Cattle should be weighed within 7 days of scanning;
  8. CGA recommends that ALL animals are weighed and scanned for a given contemporary group;
  9. Animals should be in good flesh at the time of scanning. Bulls should be scanned prior to being taken off of gain test. Heifers should be scanned following a growing or developing program. Scanning at these times allows animals to express maximum genetic differences for marbling and fat thickness;
  10. Use a squeeze chute with side panel doors that will properly restrain cattle and provide access to the region of scanning;
  11. Make sure that the scanning area is dry and out of direct or bright sunlight;
  12. Provide a safe, grounded, 110-volt outlet with a clean signal for electrical supply;
  13. Make sure cattle are clipped and clean in the scanning region, with no more than ½ inch of hair in the scanning area;