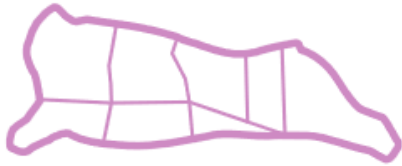




Rockingham County Fair



2025 Ultrasound Carcass Contest



Ultrasound Data Collection Date, Thursday August 14th, 2025:

Ultrasound Data Collection Date Times:

Hogs – 8 AM

Steers 9 AM, followed by Dairy Steers

Lambs 10:30 AM

Goats 11:00 AM

Scanning Location: Hogs – Near scales, Steers – Adjacent to Steer Barn; Lambs/Goats – 4-H/FFA Lamb/Goat Barn

Carcass Contest Objectives:

1. Create a fair and objective system of recognizing exhibitors and their animals of exceptional carcass merit
2. Provide an educational opportunity for exhibitors to learn about carcass grading and quality factors
3. Identify selection, nutrition and management practices that lead to production of superior carcasses

Costs = \$10/head per Steer or Lamb – Must be paid at the Rockingham County Extension Office by August 6th at 8 pm. Make checks payable to Rockingham County 4-H/FFA Livestock Show & Sale with “Carcass Contest” in the memo line.

Participants will need to sign up by filling out one of the following google forms:

Hogs Sign-up Google Form: <https://forms.gle/EULbMeCWVC5BU3My9>

Steers Sign-up Google Form: <https://forms.gle/khpoMX72hFxdWLU59>

Dairy Steers Sign-up Google Form: <https://forms.gle/yhGhxXAUbuCgWYWQ8>

Lambs Sign-up Google Form: <https://forms.gle/A1LVabajonQQ18P76>

Goats Sign-up Google Form: <https://forms.gle/BDmxNH5A86MbNs5K6>

Prizes will be offered for the Top 3 in each species.



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Steers

Steers will be assessed via ultrasound data collection. Yield grade is calculated using hot carcass weight, fat thickness at 12th/13th rib, rib eye area size, kidney pelvic and heart fat. Preliminary yield grades can be calculated from backfat thickness. An assumed dressing percentage of 63.5% will be used to determine carcass weight. Kidney Pelvic and Heart Fat is assumed for all steers to be 3.5%

Yield grade is calculated using hot carcass weight, fat thickness at 12th/13th rib, rib eye area size, kidney pelvic and heart fat. Preliminary yield grades can be calculated from backfat thickness.

Yield Grade Formula: $YG = 2.5 + [2.5 \times \text{fat thickness (in.)}] + [0.0038 \times \text{carcass weight (lb.)}] + (.20 \times \%KPH \text{ fat} - [0.32 \times \text{ribeye area (sq. in.)}]$.

$\%BCTRC = (51.34 - 5.78 \times \text{fat thickness, in.}) - (.462 \times \%KPH) - (.0093 \times \text{hot carcass weight, lbs.}) + (.74 \times \text{rib eye area, in}^2)$

Steers will be placed on a value grid with base prices from USDA's 5 Area Monthly Weighted Average Direct Slaughter Cattle and Premiums and Discounts based on predicted Intramuscular Fat % and quality and yield grade from the ultrasound and live weight. The Centralized Ultrasound Processing® Lab (Ames, IA) or UltraInsights® (Pierce, CO) will provide the rankings.

*Steers ***do not need*** to be clipped to be scanned*

Additional Parameters:

- Carcass must be Choice (–) or higher
- Carcasses must be below 3.99 YG or better
- %BCTRC Range = 47.7 – 50 %
- A maturity
- 600-900 lb carcass weight

Lambs

- Ultrasound data [backfat thickness at 12th/13th rib (FT) and, loin eye area (LMA)] and live weight will be used to determine Boneless, Closely Trimmed Retail Cuts (BCTRC%) for each lamb entered. Lambs will then be ranked from high to low based on this calculation.
- $\%BCTRC = 49.936 - (0.848 \times \text{HCW}) - (4.376 \times \text{FT}) - (3.530 \times \text{BW}) + (2.456 \times \text{LMA})$

Assumptions:

- Lambs must meet show rules; i.e. (90-150) – Blue O
- All lambs assumed to have 54% dressing percentage
- Body wall thickness predicted by backfat using prediction equation = $0.4634 + (0.17 \times 1.559)$
- Lambs also must meet the following qualifications adapted from the State Fair of VA:
 - Minimum fat thickness of 0.12 in
 - Maximum fat thickness of 0.35 in. (maximum Yield Grade of 3.9)
 - Minimum LMA for carcass weight using formula: $1.4 + (0.02 \times \text{HCW})$
 - 60 lb. HCW minimum LMA = 2.6
 - 70 lb. HCW minimum LMA = 2.8
 - 80 lb. HCW minimum LMA = 3.0
- Criteria: Lamb with desirable carcass merit $\geq 49\%$ BCTRC



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Goats

- Ultrasound data [backfat thickness at 12th/13th rib (FT) and, loin eye area (LMA) and live weight will be used to determine Boneless, Closely Trimmed Retail Cuts (BCTRC%) for each goat. Goats will then be ranked from high to low based on this calculation

Hogs

Hogs will be assigned to a grid based on Hot Carcass Weight and Backfat depth. Hog carcass value is then calculated and converted into a live value. Pounds Fat Free Lean is then calculated using procedure 5 from “Procedures in Estimating Pork Composition” $Lb. \text{ lean} = -0.534 + (0.291 \times \text{live wt., lbs.}) - (16.498 \times 10\text{th rib fat depth, in.}) + (5.425 \times 10\text{th rib loin muscle area, sq. in.}) + (0.833 \times \text{sex of pig})$ (barrow=1, gilt=2). Hogs are then ranked using live value \$/lb, then Lbs lean (greatest to least), then rib/backfat (least to greatest).

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Rockingham County Fair 4-H/FFA Carcass Contest Policies

- 1. Exhibitors elect to enter their animals for carcass contest at Final Weigh in. Carcass show fees will be \$10/head for both species. Must be paid in person at the Rockingham County Extension Office by August 7th at 5 pm. Make checks payable to Rockingham County 4-H/FFA Livestock Show & Sale.**
- 2. Awards will be given for the top 3 for each species.**
- 3. Animal must make grade and be eligible for show.**
- 4. Carcass Contest results do not change live grade results for show and sale.**