

Meat goat carcass evaluation

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One of the goals of the Western Maryland Pasture-Based Meat Goat Performance Test is to evaluate and compare carcass characteristics of meat goats consuming a pasture-only diet. In 2009, sixty goats were evaluated in the test. Nine were chosen for harvest. Two of the bucks were purebred Kiko, one was full blood Boer, and six were crossbred Kikos.



The bucks were transported from the test site at the University of Maryland's Western Maryland Research & Education Center to LambCo, LLC (www.lambcomd.com) for humane harvest on October 15, 2009. They were weighed immediately before harvest. Live weight (LW) ranged from 62 to 86 pounds and averaged 72 lbs. (32.7 kg). Hot carcass weights (HCW) were determined soon after harvest. Weights ranged from 24.8 to 34.9 lbs. and averaged 31.0 lbs. (14.1 kg).

Dressing percentage

Dressing percentage (hot carcass weight divided by live weight) ranged from 38.8 percent to 49.2 percent and averaged 43.1 percent. Dressing percentage (DP) for goats varies considerably and is affected by many factors, including sex, age, gut fill, and fat content. The dressing percentages observed in these goats was within the expected range. The carcasses contained very little fat, as the goats had been consuming a pasture-only diet since early June. Grass-fed livestock also tend to have more gut fill.



Dr. Nelson Escobar

After chilling overnight, cold carcass weights (CCW) were determined. They ranged from 23.8 lbs. to 33.6 lbs and averaged 29.9 lbs. (13.6 kg). Cold carcass weights are less than hot carcass weights because the carcasses lose moisture during chilling. Cold carcass weights were used to calculate carcass yields.

Kidney and heart fat

Kidney and heart fat (KH) was removed from each carcass and weighed. While fattened goats are known for depositing more internal fat than other livestock species, these goats had very minimal internal fat. Kidney and heart fat ranged from 0.121 to 0.435 lbs. and averaged 0.30 lbs. (0.66 kg). As a percentage of cold carcass weight, percent KH fat ranged from 0.32 to 2.08% and averaged 0.98%.

Goats that are fed to the point that they deposit external fat would be expected to have much higher percentages of kidney and heart fat. I am reminded of a carcass study in Texas in which feedlot goats, fed to a high degree of finish, had 3 to 6 percent kidney and heart fat.

Rib eye area

Rib eye area (REA) was measured between the 12th and 13th rib using a one -centimeter grid (each dot on the grid represents 0.1 square inches of measurement). There is a degree of subjectivity when using a grid to measure rib eye area. To reduce the subjectivity, each side of the rib eye is measured and an average value is used.

Rib eye measurements ranged from 1.45 to 2.20 square inches and averaged 1.79 square inches. The goat with the largest rib eye was a 79-lb. crossbred Kiko buck consigned by Merritt Burke from Nassau, Delaware. The actual rib eye measurements were about 0.5 square inches larger than the ultrasound measurements (U-REA) from September 10.



Fat

Back fat (U-BF) was very minimal (less than 0.05 inches) and could not be differentiated between carcasses. In goats and lambs, body wall thickness (BWT) is considered to be a better indicator of fat cover. It was measured. It ranged from 0.30 to 0.55 inches and averaged 0.40 inches.

The carcasses were completely deboned. Fat and lean were separated from the bone, resulting in separate “piles” of bone, fat, and lean, which were weighed to determine carcass percentages. Fat trim ranged from 1.10 to 2.55 lbs. and averaged 1.78 lbs. (0.81 kg). As a percent of cold carcass weight, percent fat ranged from 3.6 to 10.1 percent and averaged 6.1 percent.



Bone ranged in weight from 8 to 11 lbs. and averaged 9.5 lbs. (4.3 kg). Bone comprised from 28.2 to 36.9 percent of cold carcass weight, for an average of 32 percent. Lean tissue ranged from 14.3 to 21.8 lbs. and averaged 18.3 lbs. (8.3 kg). As a percentage of cold carcass weight, percent lean ranged from 57.4 to 65.5 percent and averaged 60.9 percent.

Percent lean

As a percentage of live weight, lean ranged from 22.6 to 30.7 percent and averaged 25.4 percent. The buck with the highest percentage of lean (carcass and live weight basis) was a 71-lb. purebred Kiko consigned by Craig Adams from Litchfield, Illinois. Adams also had several of the top-performing bucks on test, including the high-selling buck. Another goat with outstanding carcass

data was a 65-lb. 3/4 Kiko x 1/4 Spanish buck consigned by Wes Pinneo from Kincaid, Kansas.

Next year, we would like to harvest more goats from the test and perhaps incorporate a carcass contest into the performance testing program. For information about the goat carcass evaluation and/or Western Maryland Meat Goat Performance Test, contact Susan Schoenian at (301) 432-2767 ext. 343 or ssschoen@umd.edu. Information can also be found on the blog at <http://mdgoatstest.blogspot.com>.

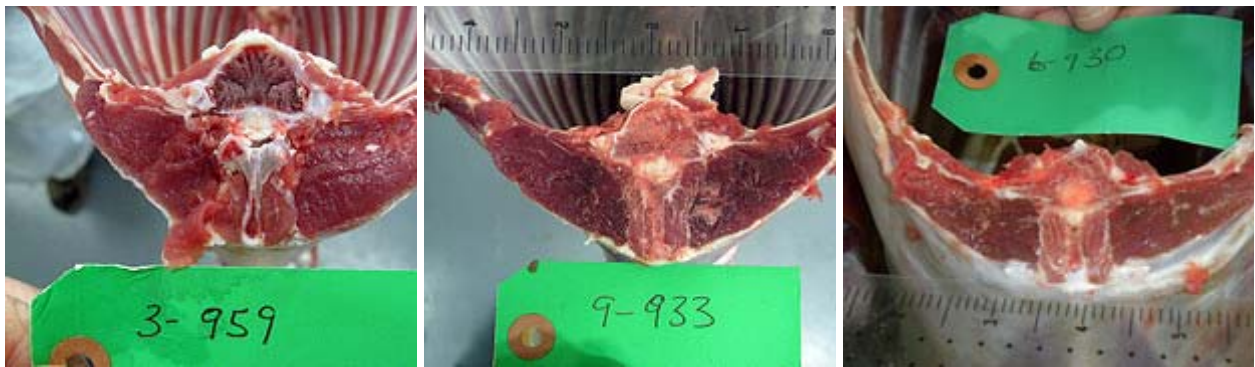
Carcass data from the nine bucks

#	Consigner	ID	LW, lbs.	HCW, lbs.	DP, %	CCW, lbs.	REA, in ²	U-REA, in ²	U-BF, in.	BWT, in.
1	Adams	904	71.0	34.4	48.5	33.3	2.00	1.70	0.04	0.55
2	K. Barnes	906	86.0	33.4	38.8	32.3	1.85	1.30	0.03	0.35
3	Burke	914	79.0	34.3	43.4	33.1	2.20	1.40	0.05	0.50
4	Lantz	928	61.0	24.8	40.7	23.8	1.65	1.20	0.03	0.40
5	Pinneo	941	65.0	32.0	49.2	30.9	1.95	1.30	0.04	0.45
6	D. Smith	954	62.0	25.7	41.5	24.7	1.65	0.90	0.04	0.30
7	J. Smith	959	64.0	26.2	40.9	25.3	1.45	1.10	0.04	0.35
8	Lowe	933	79.0	34.9	44.2	33.6	1.80	1.20	0.04	0.40
9	Lowe	930	80.0	32.9	41.1	31.8	1.60	1.10	0.04	0.30
AVERAGES			71.9	31.0	43.1	29.9	1.79	1.24	.004	0.40

#	Consigner	ID	KH, lbs.	% KH	Bones, lbs.	% Bones	Fat, lbs.	% Fat	Lean, lbs.	% Lean	Yield, %
1	Adams	904	0.14	0.42	9.41	28.2	1.97	5.91	21.81	65.5	30.7
2	K. Barnes	906	0.65	2.00	10.98	34.0	2.21	6.85	18.53	57.4	21.5
3	Burke	914	0.69	2.08	10.54	31.8	1.94	5.85	19.98	60.4	25.3
4	Lantz	928	0.10	0.42	7.88	33.1	1.64	6.89	13.97	58.7	22.9
5	Pinneo	941	0.44	1.41	9.17	29.7	1.83	5.91	19.49	63.1	30.0
6	D. Smith	954	0.12	0.49	9.12	36.9	1.20	4.85	14.34	58.1	23.1
7	J. Smith	959	0.27	1.08	8.00	31.6	2.55	10.09	14.47	57.2	22.6
8	Lowe	933	0.20	0.60	10.40	30.9	1.61	4.78	21.36	63.6	27.0
9	Lowe	930	0.10	0.32	10.15	31.9	1.10	3.46	20.43	64.2	25.5
AVERAGES			0.30	0.98	9.52	32.0	1.78	6.06	18.26	60.9	25.4

Rib eye images





Thanks to everyone who helped to collect carcass data and take pictures: Susan Schoenian, David Gordon, Mary Beth Bennett, Dr. Nelson Escobar, and Dr. Scott Updike. Thanks to Dale Johnson for hauling the goats. Thanks to our consigners for letting us collect carcass data from their goats.

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