LAMB CARCASS MEASUREMENTS

JAMES D. KEMP
UNIVERSITY OF KENTUCKY

On Unsplit Carcasses

Length

Body - Anterior portion of hip bone (determined by skewer) to anterior side at midpoint of first rib. (determined by skewer) Measure both sides and average. All lambs in commercial establishments are split at the heart, and you can see this point.

Hind Leg - Anterior portion of hip bone (find with skewer) to first joint of foot. Measure both sides and average.

Fore Leg - (From break joint - proximal sesamoid) to edge first joint above metacarpal tuberosity - length large metacarpal bone.

Tibia - From break joint at the distal end of tibia to proximal end of tibia or stifle joint.

Neck - From posterior portion of last cervical vertebra to anterior center portion of atlas joint. (Use skewers to project points to side).

Width

Shoulders - From outside of meat to outside of meat at first rib parallel to floor. Do not extend calipers beyond fore shank.

Leg - From outside of leg to outside of leg at widest point parallel to floor.

Loin - One inch anterior to hip bone at "small of the back" parallel to floor. Don’t extend calipers across flank.

Neck - Parallel to body and perpendicular to the floor at the midpoint of the measured length.

Depth

Chest - At the 6th rib parallel to floor.

Circumference

Leg - Parallel to the floor beginning in the twist as close as possible to the dock. Use a string. Measure both legs and average.
**On Split Carcasses**

**Length**

- **Body**: Anterior portion of last lumbar vertebra to anterior side of first rib near the vertebra. Measure both sides and average. When the carcass is split, the reference point can be seen.

- **Hind Leg**: Anterior portion of last lumbar vertebra to first joint of foot. Measure both sides and average.

- **Fore Leg**: Same as for unsplit carcasses.

- **Tibia**: Same as for unsplit carcasses.

- **Neck**: Same as for unsplit carcasses.

**Width**

- **Shoulders**: From outside of meat to center of split backbone at first rib parallel to floor. Measure both sides and add.

- **Leg**: From outside of leg at widest point to inside of leg. Measure both legs and average.

- **Loin**: From outside of meat to inside split backbone at last lumbar vertebra.

- **Neck**: Same as of unsplit carcasses.

**Depth**

- **Chest**: At 6th rib parallel to floor. Measure both sides and average.

**Circumference**

- **Leg**: Parallel to floor 3/4 of way from break joint to anterior portion of aitch bone.

**Unsplit or Split Carcasses**

**Thickness of Fat**

- **Hind Saddle**: Directly over sixth lumbar process. (preferably on unsplit saddle.)

- **Back**: Over center of eye muscle (longissimus dorsi muscle) for both right and left rib "eye" at posterior end of rack. Back cut between last two ribs.
Back Measurements - (Posterior end of rack between last two ribs)

**Depth** - "Eye" muscle (longissimus dorsi) - Depth across center of "eye" muscle, from lower edge of fat to lower edge of muscle. Average two measurements from right and left sides of carcass.

**Width** - "Eye" muscle (longissimus dorsi) - Width of "eye" muscle from spinous process across the center of "eye" muscle. Average two measurements from right and left sides of carcass.

**Length Back** - Posterior edge of fifth rib at backbone to posterior edge of twelfth rib at backbone.

**Depth of thoracic vertebra at Sixth rib.** - Depth of anterior vertebra of rack from ventral surface of body to outside edge of flesh above spinous process.

---

MR, HANKINS: Has this committee made any study of any of these measurements in relation to other carcass characteristics of economic importance or, if not, what suggestions would the committee have for such study? What I am implying is that per se these measurements do not mean much. It is only in relation to other things of known economic importance that they take on significance.

MR, HANKINS: We have not correlated these measurements with any other carcass characteristics. Personally I don't think measurements mean too much anyway. Our job was to set forth some system of measurements because of the variation in lamb carcasses.

A student in agricultural economics at the University of Kentucky has just completed his master's thesis after working about two years correlating carcass measurements with carcass grades. His highest correlation was about .4. He worked on a large number of lamb carcasses for a long time and got no correlation.

MR, JOHNSON: For the measurement of the fore leg, it would be much easier to measure the length of the cannon bone. Maybe it would be just as significant.

MR, HANKINS: It probably would be. Our measurement, however, has been followed in the past.

MR, JOHNSON: It just seems to me that you are guessing your measurement, while the other one is obvious.

MR, HANKINS: You are not doing much guessing because you can feel the point. It is hard to stick in the skewer, but you don't have to stick the skewer in completely.
MR. BRAY: Has anyone ever tried to repeat these measurements? It is difficult on the same carcass to get a fair estimate of repeatability after you put skewers in, but how repeatable are some of these measurements like the one on the leg, for example?

MR. KEMP: I doubt that any attempt has been made to find out. We wrote to all of you and only four or five had ever done any lamb work. Most of you weren't doing any now, and several indicated you didn't think much of the measurements anyway.

MR. HANKINS: We continued to work with some lambs at Beltsville. In the last three or four years, we have had a breathing spell. We shall continue to take measurements. We are as guilty as anyone else in not getting these analyzed for whatever relationship they have to factors of known importance. It is about time somebody found out.

We recently reported on the significance of cutting yield. Especially important was the measurement of the yield of the leg, loin and rib. Unfortunately, I cannot tell you how any of the measurements you suggest or the ones that we have been taking will relate to this yield.

MR. MACKINTOSH: The objective of this committee was the setting up of something whereby any one of us at some future date will have a standard procedure to follow. It isn't a matter of whether it is correlated with something now or can be correlated, but that when we do happen to make some measurements with the idea of correlating them we will have a standard procedure to follow.

MR. WANDERSTOCK: I move that we adopt this as a standard. (The motion was seconded and carried.)

MR. BRATZLER: Just because we have a set of standardized measurements doesn't mean we shouldn't try to improve on them.

MR. MARGERUM: Is a motion that the Lamb Carcass Committee be dissolved in order? My thinking behind this is that the committee started out to set up these recommendations, and if the material as presented has been accepted we should get on in some other field for future meetings.

CHAIRMAN COLE: My own thinking on that, Mr. Margerum, is that we are still going to need a Lamb Carcass Committee. Possibly more work should be done on lamb carcasses. Although lamb, from the standpoint of economic importance in the meat industry, isn't as great as pork or beef, we still should have a Lamb Carcass Committee.

Next we will have the report of the Beef Carcass Committee. Mr. Naumann, we are going to let you take over right now.

MR. NAUMANN: At this time I will introduce George Wellington who will give us a paper on recommended procedure for cutting beef.

# # # # # #