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## Live Hog-Carcass Evaluation

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## LIVE HOG-CARCASS EVALUATION

Harold J. Tuma

The values placed on the various grades and weights of market hogs are dependent primarily on two factors:

- (1) the amount of lean in the animal compared to the amount of fat
- (2) the amount of fill.

The value of a pork carcass is measured predominantly by the amount of lean in the carcass provided the quality of the lean is not a limiting factor. There are a number of ways to estimate the amount of lean in the carcass such as: area of the loin eye, percentage of the four lean cuts (trimmed ham, loin, Boston butt, and picnic), and the specific gravity or amount of separable lean of any one of the lean cuts. Another technique used in many of the carcass contests is the percentage of the trimmed ham and loin based on carcass weight. The weight of these two cuts is easily obtained yet gives an accurate measure of the value of the pork carcass. Fifty per cent, or more in some cases, of the total value of the pork carcass is accounted for in these two trimmed cuts. The percentage of the four lean cuts is still used as an indication of carcass value by many people. The only disadvantage is that two extra wholesale cuts must be trimmed and weighed. The percentages of these trimmed cuts (both the two and four lean cuts) are based predominantly on carcass weight in South Dakota. In some instances, these percentages are based on live weight which means that dressing per cent is automatically included. This method of calculation is somewhat limited in its use due to the wide variation which can exist in the "fill" of an animal. For example, if the percentages were based on live weight an excessive shrink or fill would give a distorted or unrealistic value to the carcass. The true value of a market hog cannot be made unless fill is accurately evaluated or standardized. For our work at the meat laboratory we remove feed but allow access to water 24 hours prior to slaughter.

An indirect method of evaluating the amount of lean in the carcass is by measurement of the **fatback** thickness, which actually measures the fat content of the carcass. Normally in the live animal or carcass as the percentage of fat increases the lean content decreases. The percentage of bone will not vary appreciably.

At the present time an estimation or measure of the backfat thickness is one of the best methods used to evaluate the live animal. The probe or ultrasonic equipment both provide good measures of backfat thickness. A measure of the fat content is not, however, always foolproof as some hogs lack muscling irregardless of the amount of fat. Muscling as such in the live animal is not an easy characteristic to evaluate, although most individuals can become quite proficient with experience. The smoothness of shoulder, freedom from wrinkles back of the shoulder and along the side, spread over the back and loin, thickness, plumpness and firmness in the ham and the set of the legs are some of the points we consider in an attempt to evaluate muscling.

At the present time we are conducting some preliminary work at the meat laboratory on the live and carcass value of market hogs. We are finding differences as great as \$2 to \$3 per live hundred weight for hogs within the same USDA grade and same weight range. We are hoping that further work will give us a better picture of the value differences which exist in the full complement of USDA grades.