

# Swine Values

## body types and carcasses studied for development of a better hog

Peter C. Gaines

The **carcass value** of a fat hog is not always indicated by the dressing percentage, nor by the body type.

That fact was shown in demonstrations conducted coöperatively in Stockton by the University of California Agricultural Extension Service and the San Joaquin Farm Bureau Swine Committee.

Seven hogs were led one by one into the show ring. Producers and marketing experts judged each pig and appraised its value to a buyer, a packer, and a consumer.

After slaughter the pork was cut up and the weights of each piece were recorded.

### Variation

There was a wide variation in the quality and carcass value among the seven animals.

The current day's market value of each cut was used as a guide to determine what each carcass was worth.

Six of the pigs graded choice and one graded good, at the stockyards, although all carcasses graded about the same.

The shorter hogs carrying the most finish definitely had the least carcass value. They had shorter bacons and loins which had to be trimmed heavily. As lard prices decrease, the short pig has less worth in relation to the intermediate pig not carrying so much backfat.

The carcasses of the longer hogs used in this demonstration were not excessively long and had a lot of depth and width which made them tend toward the middle bracket—the intermediate type of body.

The intermediate type carcasses rated good. The value was not so high as the two longest pigs but the difference was small and the quality was as good or better than that of the longer hogs. The proportion of lean to fat, general marbling, and the size and shape of cuts were excellent in the middle group.

The one hog which graded good at the yards had a very desirable carcass. It graded good because, from the standpoint of the packer, it had a minimum of backfat—it was not finished.

The shortest, chuffiest pig had a value spread of \$5 between the price the packer paid for it and what the wholesale cuts would bring. Under the same conditions one of the longer pigs would have returned \$12.50, over and above the stockyard price paid by the packer.

These two pigs of different types, purchased under present-day conditions, varied tremendously in their carcass value. The longer pig actually returned about 2½ times as much to the packer as the shorter pig, even though the live weight differed but little.

Animals which have a high carcass value dress out well but chuffy animals—those which are not wasty in the belly—may dress out rather high since dressing percentage takes into consideration the fat of the chuffy animals. When lard brings less than 10¢ a pound, the carcass value actually is reduced for this type of pig.

### Grade Standard Suggested

A similar hog carcass study conducted by the University of Minnesota involved

the weight of the carcass, thickness of backfat and index-of-lean. The index-of-lean was determined by the combined weight of the hams, loins, bellies, picnics, and butts, plus the lean trimmings in terms of percentage of the total carcass weight.

At present hogs are sold on the basis of grade and weight. Producers, breeders, buyers, packers and judges have their own methods for evaluating a pork carcass. This lack of organization has fostered systems of breeding, types of fat hogs and marketing problems which emphasize the need for a unified program on the hog of the future.

The Minnesota study yielded a suggested Hog Carcass Grade Standard the validity of which was supported by the Stockton demonstrations.

The suggested standard is based on backfat, thickness and carcass weight. Length of carcass is second in importance to thickness of backfat in the measurement of value.

Backfat thickness and weight are considered to be the best simple devices to use in evaluating a carcass.

Thicker hogs usually have a lower index-of-lean percentage and the carcass has a lower value. As backfat thickness decreases index-of-lean increases but some of the cuts may not be good enough in quality to make No. 1 cuts from unfinished hogs.

Lighter weight carcasses are preferred by packers because consumers object to heavy cuts.

A great deal of progress has been made in the field of swine production but if the hog of the future is to be produced efficiently, further study is needed on the value of the carcass, especially from the standpoint of marketing.

The hog to be developed must be able to compete favorably with existing standards in economy of feed conversion, prolificacy, rapidity of gain, and all qualifications necessary for a continuous, stable industry.

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### ISOTOPES

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are again released into the general mineral pools and are replaced by other atoms.

Calcium and phosphorous metabolism can be studied by the use of appropriate isotopes. This fact allows many direct and indirect studies upon bone metabolism. For instance, studies on the effects of various diets upon the mending of broken bones have been carried out. These studies involved the influence of vitamin deficient states upon the subsequent ossi-

fication—formation of bony tissue—and reestablishment of suitable breaking strength of broken bones. The studies have served to demonstrate a procedure by which the effect of various mineral deficiencies or intoxications upon bone structure may be studied. Flourine and magnesium are known to be concerned in bone physiology; yet unfortunately there are no suitable, easily employed isotopes of these important elements. Yet, the isotope technique may be employed by the use of the isotopes of bone which are related to these elements—calcium and phosphorus metabolism.

At the present time it would appear that radioactive isotopes will not immediately be applied to routine clinical veterinary use. Isotopes have not as yet been properly evaluated as therapeutic agents and there are inherent health hazards of the isotopes which at present are not fully appreciated.

The radioactive isotopes remain research tools which promise constantly enlarging knowledge to medical and veterinary sciences.

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