

With Live Animals

"Sonar" Principles Used To Test Back-Fat and Loin-Eye Depths

An electronic device that can measure the size of a potential steak or chop in a live animal may prove highly beneficial in livestock marketing and breeding, U. S. Department of Agriculture scientists say.

This device uses ultrasonics — high-frequency sound waves — to determine the depth of back fat and depth and width of loin eye muscles in cattle and hogs. These measurements are particularly important in selecting meat animals that produce a high percentage of their weight in the more desirable cuts.

Dr. Richard L. Hiner, head of meat-quality studies for USDA's Agricultural Research Service at Beltsville, Md., says that ultrasonic waves go through tissue without harm to the animal.

The time needed for these sound waves to pass through bounce back from the interfaces or borderlines between fat, lean, and bone varies with distance or depth. The device uses these time differences to determine the depths of the various interfaces.

The nautical apparatus known as Sonar acts on the same principle to find objects in water. An electronic device similar to the one now being tested at Beltsville is used by manufacturing firms to find flaws or faults in metals.

Preliminary tests of the device are being conducted by ARS animal husbandmen and agricultural engineers. So far, comparisons of animals measured by ultrasonics before slaughter with actual measurements of the dressed carcasses show a high degree of ac-

curacy for the experimental apparatus.

If continued tests prove the device's accuracy, it may be helpful in selecting and grading hogs and beef cattle before fattening or slaughter. It might be used by feeders to separate groups of animals into grades to insure proper finish for slaughter, and thus improve the uniformity of marketed livestock.

The appearance of live cattle or hogs may not give a dependable indication of the percentage of fat and lean meat they will yield when slaughtered. Many animals show meat-type characteristics outwardly, but are found on slaughter to contain a high percentage of fat and to yield little lean meat.

ARS scientists also see the use of this type of electronic device as a great aid in increasing the effectiveness of breeding programs. The increased accuracy it would permit in the selection of meat-type breeding stock would reduce significantly the time needed to produce superior lines. It would also result in a substantial saving of time needed to measure, probe, and judge individual animals by prevailing methods.

This new ultrasonic device has not proved feasible for sheep because of their fleece. Contact with the animal's skin is necessary for accurate readings. Such skin contact is fairly easy with cattle and hogs.

Deer Winter Kill

(Continued from page 6)

they did not grow very much throughout the year and some lost weight. This may have been due to the poor-quality feed or not enough food.

If full-fed from late spring until fall on nutritious feed, captive deer will grow to about double the usual Pennsylvania size, report T. A. Long and Robert L. Cowan, conducting the Penn State studies.

The average weight of legal bucks shot in Pennsylvania in recent years has not been over about 115 pounds.

Short feed supply in March and April doesn't seem to affect the final antler size, these studies show. However, antler growth and "rubbing out" of moss are delayed.

Society No. 2 Meets With Mrs. John Snavely

Mrs. John Snavely, Manheim, was hostess for Society No. 2 Saturday afternoon.

Mrs. Andrew Low was elected to the president's post, with Mrs. Carl Brubaker becoming secretary. Both officers will serve two year terms. Mrs. Nathan Oberholzer was named to the Flower Gift Committee.

Mrs. John Dante led group

singing, with scripture and devotional readings by Mrs. Wilbur Thompson.

Arrangements were made for sewing at General Hospital in February and for assistance to sickness and fire victims in the community.

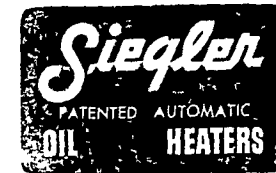
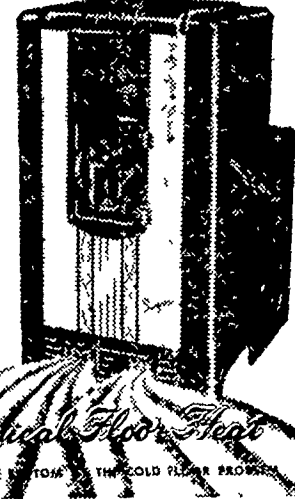
Mrs. Rufus Waltz, Elstonville, presented a demonstration of Christmas decorations. Mrs. Snavely and Mrs. Brubaker also had a demonstration of holiday pastries.

Mrs. Brubaker and Mrs. Margie Shelly were co-hostesses.

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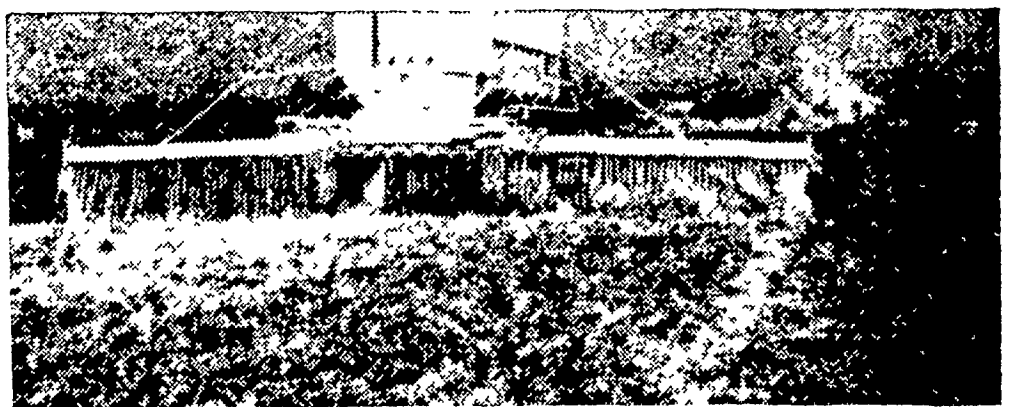
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