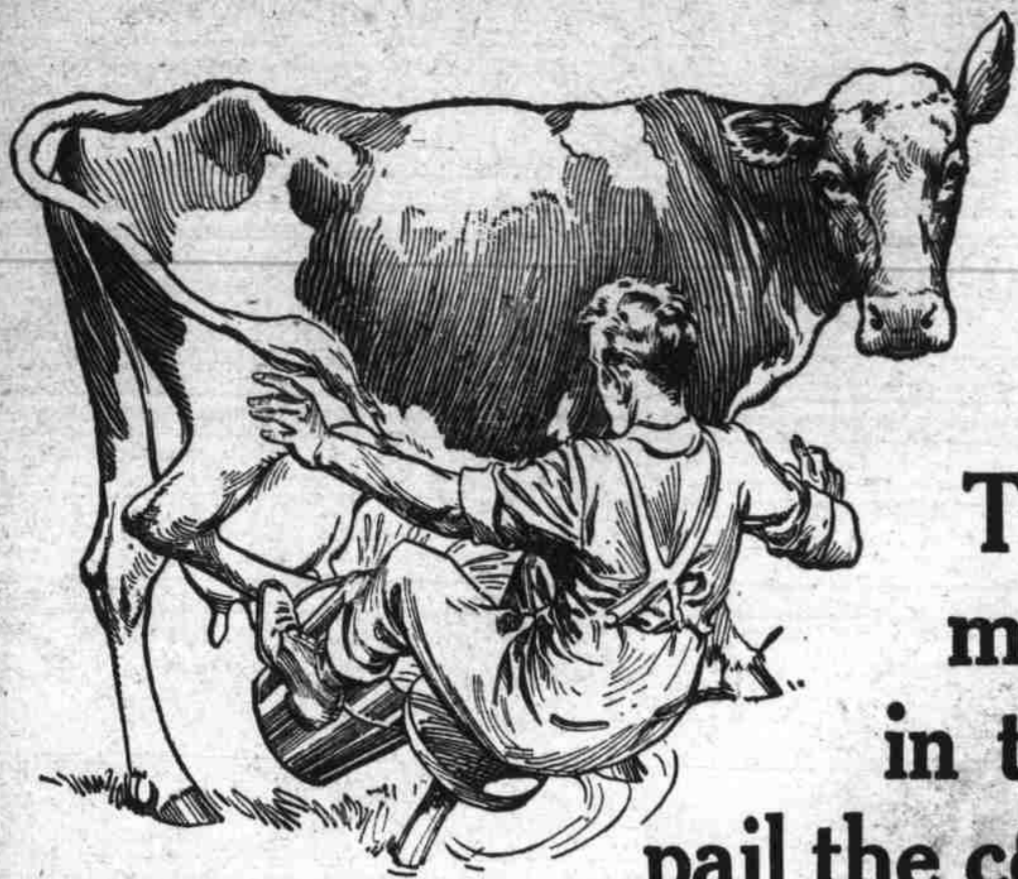


## LIVESTOCK AND DAIRY



The milk in the pail the cow kicks over is lost forever

AND the butter-fat that goes into the can through the skim-milk spout of a cheap, inferior or worn-out cream separator is just as surely lost as the milk in the pail the cow kicked over.

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Get Your  
**DE LAVAL**  
Now — Right Away

every day you use it it will be paying for itself out of its own saving.

If you haven't the spare cash right now that need not hinder your immediate purchase.

We have an arrangement with De Laval agents which makes it possible for any reputable farmer to secure a De Laval on the partial payment plan—a small payment at time of purchase and the balance in several installments, so that a De Laval really pays for itself while you are using it and getting the benefit from it.

Let the De Laval start saving cream for you right now while butter and cream prices are highest. See the nearest De Laval agent at once, or if you do not know him, write us direct for any desired information.

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## LOOK OUT FOR OX WARBLER IN CATTLE

**Maggot Which Attacks Backs of Cattle—Reduces Milk Production and Retards Growth of Animal, as Well as Damaging Hide**

THE United States Department of Agriculture is urging cattle owners to take steps to rid their cattle of ox warbles or "wolves", the importance of which to the cattle industry has been generally underestimated. Ox warbles are the whitish grubs or maggots which develop from the eggs deposited by certain flies known as warble flies, or heel flies, and which injure the hides, reduce milk flow and retard the growth of the animals. The maggots are commonly found just below the skin on the backs of cattle, in the spring. Their presence is revealed by local swellings about the size of pigeons' eggs, each with a small central hole or perforation through which the maggot breathes. From this hole the maggot, when mature, emerges to enter the ground and change to the adult or fly stage. When full grown the grub is about three-fourths of an inch in length.

Until recently warbles were not regarded as serious, because it was thought that the loss they occasioned came principally from the damage they did to hides. Even this loss in the aggregate, however, is important, as hides show warble holes three to six months in the year and dealers pay from 50 cents to \$1.50 less for hides that show even moderate warble infestation. In many cases the scars left after the holes have healed cause buyers to cut prices considerably.

The loss from the warble, however, is by no means limited to the holes the maggots cut in the hides. Extensive investigations in Germany and Denmark indicate that the losses through reduction in milk supply in dairy cattle, the retardation of growth in young stock, and the loss of flesh in all classes of animals are twofold greater than the damage done to the hides. In some of these tests the early extraction of the grubs from the backs of infested cattle resulted in an increase of nearly 25 per cent in the milk production. Animals from which the grubs had been extracted showed a gain of more than 5 per cent in weight over similar animals in which the pests were allowed to develop normally.

## Methods of Controlling Warbles

THUS far the veterinarians and entomologists have determined no better way of controlling these pests than through the systematic extraction and destruction of the grubs from the backs of infested animals.

When the larvae are nearly ready to leave their host they may be easily squeezed out by pressing the swelling with the fingers, but if not so far developed it is often very difficult to get them out by squeezing. In such cases a slender pair of forceps may be used for pulling them out. If the swelling and its opening are still very small the best way of extracting the grub is to make an incision with a knife, after which the grub can be squeezed out by applying strong pressure. Kill the grub when removed.

It is important that warbles be removed as early in their development as possible. This relieves the infested animals from the irritation and prevents the enlargement of the exit holes. While this practice is not applicable to ranch conditions, it is easily put into effect on small farms and in dairies. In the Southern States the herds should be gone over early in December, and about twice later at monthly intervals. If no grubs are allowed to drop to the ground and reach maturity the number appearing in cattle in subsequent years will be materially reduced, and

if extraction is followed up for several years almost complete eradication will result. Of course it is important where possible to get concerted action among the stockmen in the destruction of these pests.

In extensive experiments along this line in Germany it was determined that the cost of removing all the warbles from the backs of cattle during one season was about three cents per head.

## Shrinkage of Meat During Curing Process

IN MAKING some experiments to ascertain the shrinkage of meat during the curing process, Mr. Dan T. Gray has arrived at the conclusion that the average farmer should dispose of what meat he has for sale before the hot months of July and August.

In the experiments, many tests were made to determine just what the shrinkage was, and the meat was cured under average farm conditions. Hams, shoulders and side pieces were used, but only the hams will be considered for the purpose of illustration. Thirty-eight hams were taken and placed in brine for a period of 52 days. During this time they shrank 4.5 per cent in weight; that is, for every 100 pounds of meat cured, 4½ pounds were lost during the time the hams were in the brine.

The next step was to hang the hams up in the smokehouse for a period of five days before smoking. On weighing them just before applying the smoke, it was found that they had lost an additional 5.3 per cent in weight. They were then smoked at irregular intervals for another period of five days and lost during the time another 5.3 per cent. After being smoked, the hams were then wrapped in paper, placed in sacks and hung in the top of the smokehouse. After remaining there for a period of 255 days they were taken down and weighed and were found to have lost during this sacked period 21.9 per cent. This made the total loss amount to 37 per cent of the original weight during the 317 days of the curing period.

It is not wise for the reader to gather the impression that meat shrinks this much under all conditions, however, for such is not the case. In this test the sacked period was for 255 days, and the average farmer would probably keep his meat only half of this time, therefore the shrinkage of his meat would be only half as much as is recorded above. It seems from the records that the greatest shrinkage was during the months of July and August and partly for this reason it would not seem to be best to keep meat very long after smoking. If it is to be sold, the best time to sell is just after the smoking period when the loss in shrinkage should not exceed 15 to 18 per cent.

F. H. JETER.

West Raleigh, N. C.

## SALE DATES CLAIMED

The Progressive Farmer is glad to announce and claim for the breeders the following dates upon which sales of pure-bred livestock will be held:

## Herefords

Feb. 29-March 1, 1916—O. Harris & Sons, Harris, Mo.  
March 4—St. Joseph, Mo., Northwest Missouri Hereford Breeders' Association, Jesse Engle, Sheridan, Mo.  
March 28—W. J. Davis & Co., Jackson, Miss.  
Feb. 8—Des Moines, Iowa, under the management of the American Polled Hereford Breeders' Association.

## Shorthorns

Feb. 23, 1916—Lespedeza Farm, Hickory Valley, Tennessee, at Tri-State Fair Grounds, Memphis, Tenn.

## Aberdeen-Angus

Feb. 1, 1916—Breeders' Sale, Montgomery, Ala., M. A. Judy, Mgr., West Lebanon, Ind.

## Duroc-Jerseys

Feb. 5—McKee Bros., at Forest Home Farm, Versailles, Ky.

Our readers will confer a favor upon us if they will keep us advised of sales, and we will be very glad to claim further dates for breeders if they will let us know in time.

This is quite important, as it often prevents a conflict of dates and adds to the success of each individual sale.