

Shrinkage in Transit.

Feeder and drover must always figure on their cattle shrinking an appreciable amount as they go forward to the stock yards. Sometimes, if stock is driven for a considerable distance before it is loaded on to the cars, it will gain in transit, or when they take their fill in the yards.

W. F. Ward and James E. Downing of the United States Department of Animal Husbandry have followed a large number of cattle from feed lot to market, and have ascertained the causes and conditions under which shrinkage is most severe. A difference in seasons and a difference in weather when the stock is being transported or unloaded, all tend to make it difficult to estimate the shrinkage a carload of cattle might undergo. The word "fill" refers to the weight of the food consumed after being unloaded at the yards; shrinkage in transit means loss of weight from shipping point to yards, and net shrinkage or "shrinkage" designates the amount lost even after the "fill" has been consumed.

Of all classes of cattle, generally, the stall-fed steer acquainted with man and his custom of supplying food will have less net shrinkage than any other class. Range steers may not shrink any more in transit, but they are uneasy in the yards. They are not acquainted with man on foot, and will not bring themselves about to eat and drink, and consequently when the market opens they have neither rest nor food, and weigh out with considerable shrinkage. It is recognized by drovers that, all things being equal, bulls will shrink more than any other class of cattle. Cows are the next highest losers, while steers and heifers of the same age show equal losses. Rest is almost as necessary as food in the yards in order to fill up the hollow spaces, and make the stock look fresh and full. Buyers will detect an over fill, and will bid correspondingly low, but a haggard, drawn appearance is only removed by a rest after shipment, and where it exists, the buyer is liable to be prejudiced against them.

Some influences at work to determine the final condition of the cattle are: character of fodder previous to shipping, distance shipped, nature of treatment in transportation, weather during shipment and when they arrive at the yards, as well as the time of day they arrive. In one trial in the Northwest States it was found that cattle shrank on an average 3.3 per cent. of their live weight during the first 36 hours en route, while the Southwest investigation showed that cows shrank 3.5 per cent. of their live weight, and mixed cattle 3.7 per cent. The heaviest shrinkage occurs during the first 24 hours, which, in one class of mixed silage-fed cattle amounted to 2.05 per cent. of their live weight, and in transit between 24 and 36 hours it amounted to 3.57 per cent. of their live weight. Interesting, too, is the difference in stock fed on different rations. Beet pulp produces animals and finish which suffer considerably during the marketing operation. This is very pronounced when they are being prepared for shipping, and the pulp is replaced in their feed lots by hay. One lot of 88 shrank 5.995 lbs. in 23 hours, or 68 lbs. apiece, and in transit between two and five days shrank 5.40 per cent. Mixed corn-fed cattle, averaging 1,303 lbs. at origin and less than 24 hours en route, shrank 67 lbs. in transit, consumed a fill of 16 lbs., and showed a net shrinkage of 51 lbs. each, or 3.91 per cent. of their live weight. A bunch averaging 1,167 lbs. in transit between 24 and 36 hours showed a net shrinkage of 48 lbs. or 4.11 per cent. It has been noticed that the silage-fed cattle in transit less than 24 hours only shrank 2.05 per cent. One lot had been held off water for 15 hours before shipping, but given dry feed. They shrank so little in transit that the fill at the market over-balanced it, and they showed a gain of seven lbs. each. In most cases with silage-fed cattle they were held off water for 12 hours previous to shipping, and, although they shrank considerably in transit, they always took a good fill at the yards and showed a small net shrinkage. The shrinkage in range cattle in transit over 70 hours during a normal year is five to six per cent. of their live weight, and if en route 36 hours or less the shrinkage will range from three to four per cent. of their live weight.

When cattle are to be shipped long distances they carry better when unloaded for feed and water than when these necessities are supplied them in the cars. When feeding in the yards they usually eat more, and it affords them rest at the same time. This condition tells for an improved appearance at their destination. The accommodation they are tendered on arrival also affects the shrinkage. In sheltered, quiet, well-drained pens they will usually feed and rest far better than in a noisy, uncomfortable spot, and if they arrive the afternoon before they are to be sold they will usually take a good fill and rest.

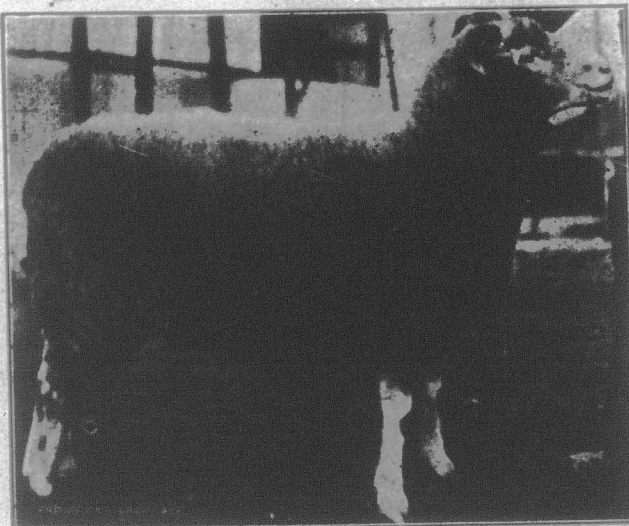
The people who talk most about farmers not producing enough are about the last to take off their coats either literally or otherwise, and give them a lift.

THE FARM.

Good Prices in York County.

Editor "The Farmer's Advocate":

All crops the past year were up to the average with other years. Turnips and mangels were both undersized, most of the turnip crops being attacked by lice. Hay was light, about one ton to the acre being the average. Second-crop clover was very light, but good returns were obtained by those who are threshing it. Winter apples were scarce, most of the trees being attacked by the tent caterpillar. All small fruits were not up to the average because of the spring



Dorset Ewe.

Champion at Toronto, 1913. Owned by W. C. Wright & Son, Glanworth.

frosts and the summer drought. Pastures have been cropped very short, as the straw was short. Farmers left their cattle out very late. More silos are being built every year. Corn was a good crop this year and most farmers will have plenty of fodder. Potatoes were well above last year's average.

Many auction sales are being held, and while horses are not selling as high as they did last spring, cattle are very high. Good cows are selling from \$60 to \$125 in many instances and six-week-old calves sell as high as \$30 each. A brood sow with seven small pigs sold for \$90, while but a few days before that a brood sow, which was to farrow in January, brought \$78. Common ewes are selling from \$10 to \$15 each. A large number of farms are being sold at good prices.

ROSS E. RATCLIFF.

York Co., Ont.



Vernon H. of the Burn.

A pure-bred Aberdeen-Angus steer, reserve for grand championship at Smithfield.

Worthy and Interesting.

I consider your Christmas Number a very worthy and interesting production. I also note with pleasure the display given our ad., and may say that already we have received applications as a result of this advertisement.

Immigration Dept., Salvation Army.
D. LAW CREIGHTON.

We thank you for the copies of your Christmas number. We wish to congratulate you on getting out such an exceedingly good magazine as your Christmas Number, which is full of information for everyone, and a great credit to the publishers.

ERNEST HENDERSON.

Manager Canadian Salt Co., Ltd.

The Double Riding Plow.

Editor "The Farmer's Advocate":

To those who, for any reason, prefer riding to walking, the double riding plow is surely a god-send. In addition to the comfort gained by the driver, the quality of the work done is generally better than that done by an ordinary twin plow where the driver walks.

One of the principal mistakes made in regard to the riding plow is in lack of horsepower. Theoretically a double riding plow is supposed to require less power than two ordinary walking plows, practically it takes as much if not more power to send it through the soil. Except where the ground is exceptionally light and open, four good horses are required, that is if the driver wishes to do rapid work. With four good horses and the ground in proper shape, between four and five acres may be turned over in an average day.

With the type of double riding plows used in Ontario where each individual plow cuts only from ten to twelve inches, it is absolutely necessary that the fourth horse should walk on the plowed land. This somewhat spoils the looks of the work done, but, from five years experience, I have been unable to see any bad effects resulting to the soil from the extra tramping. The soil here, I might state, is clay loam, inclining in some places to clay, and in others to gravelly loam. The horse walking on the plowed land must be changed every day or half day, as the soft ground makes the walking difficult. The plow I am using at present has a special offset clevis designed to allow the fourth horse to walk in the furrow. I tried this scheme this fall, but it will not work. The horses are crowded so close together that the traces rub their legs and sides so severely that sores would soon result. Besides, the horses are forced out of the straight line of draught, and are forced to walk in a sidling manner. The draught of the plow is also increased fully one-half, so this scheme is impracticable.

Of double riding plows there are two types at present designed for Ontario conditions. These types are the ordinary riding plow where plows, frame and wheels are all fastened rigidly together, and the footlift type where the plows are hung by bales from the frame. Where ground is free from stone and not too rough, the first type of plow will give satisfaction, is cheaper to buy and lighter in weight. Where the land is stony the foot-lift is the only satisfactory type as I have found out by experience. My first double riding plow was of the rigid type. It did splendid work but was not designed for a stone lifter, and after five years and numerous repairs I discarded it and bought a double riding plow of the footlift type. In this style of plow, by slackening off the spring that helps to lift the plows from the ground at the end of the furrow, greater bite can be given the plows, and they

do not need to be locked down but can be allowed to float. Running free in this manner when a stone is encountered the plows rise on their bales and pass lightly over the obstruction without breaking shares or jarring either the frame or the driver. In ordinary cases the plows will reset themselves, but where the stone is very large they may be thrown clear of the ground, and are reset by a touch of the driver's foot on the foot-trip. When running thus with the helping spring taken off or very much slackened, the plows are rather difficult to lift at the end of the furrow and require the weight of a fair-sized man on the lifting apparatus.

When buying a riding plow be sure and insist on rolling coulters. These lighten the draught, and save time and trouble when plowing in clover, manure or long stubble. Be sure and keep rolling coulters, plow wheels and the lifting mechanism well oiled or greased. This will be a saving on both horses and man. Finally when putting the plow away for the winter do not forget to give the mouldboard and coulters a coat of oil. This will save much time, trouble and bad language the following spring when you come to "clean" the mouldboards.

The ordinary double riding plow will not last in stony land. Besides the danger to the driver there is constant danger to the shares and parts of the plow. With four horses plunging along at a good rate when a large stone is encountered something must "go." The driver is generally the first, and he is lucky if he finds a soft spot to fall on. Shares are constantly breaking and