

average age of all 35 months and 15 days, at latter date. The food consisted of, daily, 90 lbs. of pulped Swede turnips, 12 lbs. of cut straw, of sorts, and 12 lbs. of crushed Indian corn, given in two forms—turnips and straw put in a heap in alternate layers, so as to slightly ferment, and corn mixed with them when served; and others pulped turnips direct from the machine. The four steers averaged, on entry, 1512 lbs., and 1764 when finished—thus gaining 252 lbs. in 87 days—being 2 8-10 lbs. per day, or 16 per cent. on their weight. The six steers, on entry, averaged 1260 lbs., and 1492 lbs. when withdrawn—thus gaining 232 lbs. in 87 days—being 2 7-10 lbs. per day, or 18½ per cent. on their weight.

So we can make the following balance-sheet, according to current market prices, attendance, and manure, to meet each other for safe figuring

1st. example :

Cost of straw, \$5 per ton.....	\$2.61
Cost of corn, 50c per 66 lbs.....	8.70
Value of animal when entered—1512 lbs., at 5½c.....	22.16

1754lbs. sold for 6 cents.....	\$93.47
	105.24

Balance to credit.....\$11.77

2d example :

Cost of food as above.....	\$11.31
Value of animal when entered—1260 lbs., at 3½c.....	47.25

1482 lbs. sold for 5½ cents.....	\$58.58
	78.33

Balance to credit.....\$19.77

[Or a difference in favor of the half-fed steers of \$8 per head.]

There is material here for some very nice discussion and comparisons. Let me approximate the conclusions. That well-bred steers, nearly prime fat gain 3½ per cent. more on the same food than others that are not so well bred, and that were also 6 per cent. less in weight when put in competition; that, in proportion to weight, the half-fed steers gave 68 per cent. more profit than the others; that, according to weight, the half-fed steers gave 2½ per cent. more increase than others almost prime; that, in proportion to weight, the half-fed steers ate 18 per cent. more food than the others; that, as an investment, without reference to manure, the matured animals returned fully 9 per cent., and the half-fed ones 40 per cent., on the original cost—being a difference of 31 per cent. in favor of the leaner animals. No doubt there are circumstances for and against each of these conclusions, which it may be well to notice. The previous treatment of our own bred cattle was likely more favorable. The change of place and food was against the others. Their inferiority of breeding might be against them. Note how much fat, heat, and flesh substances of food was required to produce a certain quantity of beef. One animal, in 87 days, ate, flesh, fat, and heat producers :

Turnips,	Straw,	Corn,	Total.
574 lbs.	441 lbs.	831 lbs.	1846 lbs.

In the case of the animals, therefore, the 1846 lbs. of fat, heat, and flesh forming substances in the three sorts of food seem to have been required to make 236 lbs. of probably the same things in the animal's frame. This we find was one of flesh to seven of fat. There is, then, under proper management, proper food, and with the proper animal, a large profit in growing beef.

It may be remarked, in reference to the foregoing statement, that the profit would have been much larger, had all the steers in question been bred where they could have been produced, at the proper age, at less cost.

I have alluded to the large increase in the trade in beef with Great Britain. From small beginnings, it has grown to large proportions. In 1876, the total domestic exports from the United States were :

Live Cattle.....	\$1,110,703
Salt Beef.....	3,186,304
Sheep.....	171,101

\$4,468,108

These figures include the total exports to all countries, from the United States.

In 1877, the exports of live cattle, sheep, fresh beef, and salt beef to Great Britain, were :

Live Cattle.....	\$ 546,829
Salt Beef.....	1,200,000
Sheep.....	22,578
Fresh Beef.....	4,552,523
Fresh Mutton.....	36,480

An aggregate of\$6,358,410

to Great Britain alone, as against \$4,552,523 to all foreign countries during the previous year; being an increase in the items named of \$1,989,382.

In 1878, the United States domestic exports to Great Britain were :

Live Cattle.....	\$2,408,843
Sheep.....	109,777
Swine.....	69,395
Hams and Bacon.....	38,211,651
Beef Salted.....	2,118,992
Beef Fresh.....	4,906,152
Mutton Fresh.....	8,272
Lard.....	10,175,476
Meats Preserved.....	4,284,512

\$62,305,969

Thus, the aggregate exports in meats and cattle, sheep and pigs, to Great Britain alone, in 1878, amounted to nearly as much as the total exports to all foreign countries in 1877, while the total exports in those classes to all foreign countries were to the value of \$104,272,552; showing an increase from the previous year of \$46,983,794, or more than double the export trade in 1876, which amounted to \$49,592,834. I could not obtain the statistics of the trade for the present year, but it has been stated that the exports of live stock this year have reached the value of \$11,487,754. It is clear, therefore, that the demand keeps place with the supply, so that Short-horn breeders have good cause to believe that their trade will be prosperous. The exports of live stock for food from Canada, are also very encouraging. In 1878, in cattle, sheep, and swine, they amounted to \$1,937,365, and in 1879, to \$3,342,006—an increase of \$1,404,741.

Amid these indications of prosperity, we must not conceal from ourselves the fact that great danger threatens the whole trade in live stock. It is beyond doubt that contagious pleuro-pneumonia exists among the cattle of several States of the Union. At this date, it is unnecessary to inquire into the truth of the statements as to the existence of the disease among the cattle composing the cargo of the Ontario, and which led to the scheduling of American cattle. There is grave reason to doubt the correctness of the conclusions arrived at by the veterinary examiners of the Privy Council. We have high authority for stating this. Professor Williams has, in very plain terms, denied that they were correct; and it will not do to impugn the professional status of Professor Williams, in order to get rid of his statements. He is well known to be one of the first veterinary pathologists of the day; and the best proof of this is, that on the 27th of May last, at a special meeting of the council of the Royal College of Veterinary Surgeons of Great Britain, he was elected President of that body, by a vote of more than two to one over his competitor, who had been one of the examiners, on behalf of the Privy Council, of the cattle brought by the Ontario, and who had given a different opinion from that of Professor Williams. But as has been stated, we know that contagious pleuro-pneumonia does exist among cattle in some Eastern States, and the imperative duty of every American breeder and professional man is to urge, with determination which cannot be misunderstood, that the Government of the United States shall take such action as shall effectually "stamp out" this dire scourge, and prevent its re-introduction among the cattle of America. Had the Government heeded the warnings given when we were threatened with an invasion of rinderpest, much of the difficulty would have been avoided, and a proper system of quarantine and veterinary inspection would have been instituted. This Association, at its last meeting, at Lexington, two years ago, sent a memorial to the Government on this subject, to which little attention was paid. Last spring, when the existence of the disease was ascertained, the officers of the association sent a memorial to the Government, urging the appointment of an international veterinary commission for the purpose of ascertaining where the disease existed, and for