

published some years ago an account of the results of 190 days feeding of six milch-cows. The food was made up as follows :

Meadow hay .....	56 lbs
Oil cake .....	30 "
Malt cummins .....	9 "
Bran .....	9 "
Bean-meal .....	9 "
Roots .....	204 "
Oat-straw .....	50 "
Bean-straw .....	12 "

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This gives 63 pounds a day per head, and the cost, in England, about twenty five years ago, was \$311.00 or twenty seven cents a day for each cow! The six cows gave, in the 190 days, 16,000 quarts of milk, which at 4 cts a quart, amounts to \$640.00, leaving the handsome balance of \$329.00, or \$55.00 per cow, to good, and the dung, too.

Now, samples of this dung were sent to Dr Way for analysis. According to him, the six cows produced during the 190 days, the following amounts :

	Pounds	cts	Value
Nitrogen	414	18	\$ 74.52
Phosphoric acid	393	10	39 30
Potash	585	6	35.10
			<hr/> \$148.92

and this comes to an additional sum of \$24.82 per cow, or, in all, in round numbers, \$80.00 a head!

I have reckoned the prices not according to the market rates of commercial fertilizers, but from 10% to 16% below them, as I am strongly inclined to think that all scientists are inclined to overrate them. Of the quantities of the constituents there can be no doubt; but, as it is acknowledged by all that dung takes some time to benefit the crops it is applied to, and as during that time much of its soluble ingredients, by lixiviation, &c., vanish, I think we are committing a great error when we talk of dung being worth \$250 a ton. That we must look to the manure for some part of our profit, is certain, particularly in fattening beasts, but we need not carry this too far—see "Vile on cattle manure," *passim*.

In England, the manure of a hay-fed cow was reckoned to be worth about \$150 per ton, and as each cow generally makes about 10 tons in the winter half-year, the value would be \$1500. Of course, highly fed animals, like Mr. Horsfall's, produce manure of much better quality than these, and fattening bullocks make better still; but we must make a deduction for Canada on account of lower prices for grain, &c., and I fancy that \$150 a ton is quite high enough for any dung in this country.

You will always take care that your cows have plenty of water, winter as well as summer. The quantity of milk yielded is more influenced by this than most people imagine. Mr. Horsfall found that cows, when giving only two gallons of milk a day, drank four gallons more water than fattening cattle of the same weight; and he inferred from this that the cows gave off from the lungs and from the skin over two gallons of water per day more than the fattening cattle of the same weight, since the water contained in the milk was only one gallon and three quarts, while the cow drank four gallons of extra water! The manure of both milch cows and fattening cattle contained about the same amount of moisture, so that can't account for the extra water.

Never overstock your pastures at any time. Economy requires the dairyman to get the greatest amount of produce from each acre of his pasture, and this can only be done by

full but not over-stocking. Divide your pasture, if possible, into three lots, so that the cows may have a change at least every fortnight. Barb-wire fencing is so cheap, now-a-days, that there should be no difficulty in this, and you will find that, by this plan, you will be able to keep at least 12% more stock on the same number of acres, to say nothing of your whole herd doing much better. ARTHUR R. JENNER FUST.

**Breeds of Dairy Cows--I.**

EDS. COUNTRY GENTLEMAN—Let us fairly understand this matter, for it certainly cannot be fairly understood from the numerous statements made within the two or three past years, and continued weekly or monthly now in many of the agricultural papers. In the most prominent of them, the COUNTRY GENTLEMAN, is a weekly flood of advertisements of the Jersey and Holstein breeds, and certificates of their enormous yield of milk, cream and butter.

Now, I am not disposed to question the truth of these statements, or contradict the value of these breeds to the promotion of our dairy interests, which I acknowledge that to a very considerable extent they may do, and have already done; but to examine to some extent what improved foreign breeds have done in many years past, as well as what they are now doing throughout the widespread dairy regions of our country.

The SHORT-HORNS, under well recognized pedigrees, of purity in blood, were imported into New-England in 1817 and 1818, and within a few years afterwards into New-York, Philadelphia and Baltimore. The breed then had a high reputation as dairy cows. They were not only bred among themselves in purity of blood, producing valuable milkers among their heifers, but the produce of the bulls used on native cows also made a decided improvement in the dairy yield of descendants; so that the Short-Horn grades from our common cattle became quite popular among intelligent dairy-men throughout the districts where they were so bred and used, as they are also at the present time. But there now exists an essential drawback to the Short-Horns as connected with their dairy yield. Their remarkable flesh-taking qualities, and early maturity soon found them making rapid migration into the rich grazing and corn-growing States west of the Alleghany mountains, where the milking qualities were of secondary value, and by neglect of them, in preference for flesh, both in thorough breeds and grades, they have measurably lost their reputation and preference for the dairy. Yet in the more easterly States they still have a good reputation as dairy cows, both in thoroughbreds and grade, but are not advertised as superior to all others, although in many individual qualities they might truthfully be stated as the peers of any others, of whatever breed they might be.

THE DEVONS were also imported into New-England, New-York and Maryland in the same years with the early Short-Horns. Although of much less size, yet beautiful in symmetry of shape and in color, they were equally good with the Short-Horns, according to their size and consumption of food. But from their lack of size, weight and early maturity, although in the latter quality not much deficient, they never attained the notoriety and wide-spread occupation in the western grazing regions so rapidly achieved by the Short-Horns. Of the valuable dairy qualities of the two breeds above named, I have had positive proof, in breeding them from the year 1834 to the present time with the Short-Horns, and upwards of twenty years with the Devons, in both thoroughbreds and their grades descended from our native cattle. I never used a grade bull from any breed during the fifty years of my stock farming, fully believing that the only way of true improvement is to breed from thoroughbred