

never once off their feed. The silage lot began with 38 lbs. a head a day, which rapidly increased to 45 lbs. up to 51 lbs. Of the other lot, 20 lbs. of hay a day was about the consumption from beginning to end of the experiment. There was a difference in the consumption of water between the lots, as might be expected from the two foods: hay-lot drank 70 lbs. a day, and silage-lot 41 lbs., and the result of the experiment, continued for 84 days, by which time the hay was finished and the silage all but done, was as follows:

	Receiving hay.	Receiving silage.
Total weight of bullocks, Dec. 16th, 1886...	6769 lbs.	6768 lbs.
" " " March 10th, 1887..	7748 "	7757 "
Total gain in 84 days.....	989 lbs.	999 lbs.
Gain per head daily	1.86 "	1.98 "

Well, pretty equal work, considering the vast apparent difference between dry and succulent food, is it not? But there is another point brought out in this experiment which is worthy of remark. the difference between sheds and boxes for cattle feeding. In each lot of 6 bullocks, 4 were kept in boxes about 8 x 10 feet superficial measure, sunk two feet deep in the ground, and never emptied until the expiration of the fattening time; the other two were in ordinary sheds, secure from the weather, and roomy enough to allow of the beasts walking about. The former practice is the one I have always followed, and, to speak frankly, I believe that there is no other system to be compared to it. Let us see how the result bears out my opinion:

Hay-Bullocks in boxes,— 2 1/2 lbs. a head daily.	Hay-Bullocks in sheds.— 1 1/2 lbs. a head daily.
Silage-Bullocks in boxes,— 2 1/4 lbs. a head daily.	Silage-Bullocks in sheds— 1 3/4 lbs. a head daily.

It is evident by this table that, whether fed on dry or on succulent food, the bullocks in the boxes did much better than the bullocks in the sheds. The Scotch say the system is not natural; that the *hammels* (1) are better, that room is wanting for so many different enclosures, &c. The Norfolk, Essex, and other Eastern counties' men say that they never could get their immense crops of straw trod into dung unless they fattened their bullocks loose in yards knee-deep in litter. This may be all very well to an untravelled farmer, but the fact remains, that a bullock kept in a loose box, with just room enough to turn in freely, will consume less food, fatten faster, and cost less for attendance, than a beast kept loose in a shed with one or two others and a yard to run into—the Scotch *hammel*;—in a large yard with from a dozen or twenty others to poke him about; or tied up by the neck in a narrow stall with hardly room enough to lick himself. A bullock in a box is always as clean as a new penny, and that with a very trifling quantity of straw—no beast, not even a pig, will lie in his excrement if he can avoid it—; he wants no currying or brushing, as he can lick himself all over until he gets nearly ripe, and then by putting his neighbour in mind of the old Saxon saying *gif goff*, i. e. if you'll scratch me, I'll scratch you, he generally gets his wants attended to. As for the manure, I need not expatiate on the perfect state in which that is found when the box, after months, is emptied. No ammonia is lost, for, owing to the constant pressure, very little has been formed, and both liquid and solid excrements are all there, in their natural and most effective forms. There is no offensive odour given out; nothing can be perceived by the nose except

the pleasant smell of the cake, corn, or linseed, given as food. The beast thrives, because he is alone in his box, and yet has his friends on each side of them: that is, he can see them, but they cannot interfere with his food and rest.

Boxes should be made in double rows, with a passage down the middle, for the transit of food, &c., wide enough to admit the dung-cart. Eight feet square is large enough for any ordinary beast. The divisions should be of stout scantling—three bars are sufficient, and they should be far enough apart to allow a beast to get his head through, backwards and forwards, with ease. The manger should be so constructed as to admit of its being raised or lowered as the height of the manure in the box demands, and should, of course, admit of being filled from the passage without the feeder entering the box. No rack will be needed, if the best system of feeding is pursued, as any hay that may be given will be cut into chaff, and if the tenant wants more dry food, he can always eat some of the fresh straw of his bedding.

To return to our experiment: The result of this last trial at Woburn is in some ways remarkable. No one would have expected that a ration of perfectly dry food, such as was given in the hay, cake, and meal, with water supplied separately, would give a result so nearly equal to that obtained by the use of succulent food in addition to the cake and meal. And the results of the comparison as regards offal to carcase is noteworthy. Previous to being slaughtered, the bullocks were carefully weighed, and both live- and dead-weights were recorded:

	Hay-fed beasts.	Silage-fed beasts.
Average percentage of offal.	43.76	44.01 (1)

a difference of .25 (2 1/2%) per cent. in favour of the silage-lot—a perfectly insignificant amount when taken as a quarter of a pound in a hundred pounds. Mr. Voelcker puts the exact weight of a cubic foot of silage at 24 1/2 lbs. Generally, I believe it is reckoned to be 40 lbs. Mr. Barnard, if I do not err, makes it 50 lbs. The two latter weights are taken from ensiled corn, and the first from grass silage: can there be such an enormous difference between the two materials?

ARTHUR R. JENNER FUST.

THE ROYAL; 1887.

Guernseys at The Royal.—The year 1887 saw the Royal at Newcastle, a very long way indeed from the Southern counties where almost all the English Guernsey breeders live. In spite of that, the Guernseys made a good show, and attracted a fair share of the general admiration. I consider that Plutaroh, were he alive now and writing on farm affairs, would have drawn, as he was so fond of doing, a parallel between Southdown sheep and Jersey cattle, as compared with Hampshire-downs and Guernseys! Lord Coventry, the Senior Steward of Live Stock, speaks thus of my favourite breed:

"This very useful breed of dairy-cattle seems likely to gain a strong footing in the United Kingdom. There are already throughout England a number of first-class herds of Guernseys, and every year the ranks of their admirers become greatly increased. Much larger in size, and more robust than than the Jerseys, they also possess dairy properties of a very high order, while with careful cultivation they might soon attain considerable merit as beef-producers. The writer has seen Guernsey bulls crossed with the ordinary mixed-bred cows of the country with great success, the produce being large, handsome cattle, with really good meat-carrying frames, and excellent dairy properties."

The mixed-bred cows referred to above are what would be

(1) It is hardly necessary for me to say that these bullocks when slaughtered were not what we usually term *ripe*. A. R. J. F.

(1) Small yards, with a shed to each.

A. R. J. F.