

so that cake alone is not sufficient to afford all the heat-givers and flesh-formers necessary to a fattening bullock, since the proportion should be as $3\frac{1}{2}$ to 1. The clover-hay gives nearly as much flesh-formers (25) as the oil-cake (28) while it affords at least $4\frac{1}{2}$ times of the heat-givers, showing that clover hay could keep the ox going, but not put much fat on him. The turnips show a low amount of flesh-formers (9) and five times as much heat-givers (46.62), while the ash from the clover-hay is by far the largest of the lot (16.64), nearly double that in the oil-cake, and more than that in the turnips.

So we must be thoroughly satisfied that, with this moderate amount of food, bullocks of fair quality will put on flesh, fat, &c., at the rate of 20 lbs. per week.

Now in what form should this food be given to fulfil our desire to allow the digestion to do its work with the greatest ease to itself? Let Messrs. Lawes and Gilbert answer the question.

They took, at Woburn (1), 6 Herefords and 5 Devons for one experiment, and 7 Herefords and 5 Devons for another experiment. The first lot were fed, after being carefully weighed, on crushed oil cake, cut clover-hay, and swedes. The second had, like the first, clover-hay and swedes, but, instead of oil-cake, a *cooked* mixture of two parts of barley meal, two parts linseed meal, and one part bean meal. The result was that the lot which had cooked food did much better than the other lot; a result very much to be expected by any one who remembers, as I do, the elaborate papers of Messrs. Warnes, Thompson, & Marshall, some 30 years ago, on the superiority of cooked linseed and bean meals, to any form of oil-cake.

It will be evident at a glance that the prepared food must save the animal action, and therefore save some amount of animal heat, which must tend to economize the heat-givers. The preparation is simple enough—boil the linseed (crushed, or if not you may expect to lose quite one half) in plenty of water, and mix, on any floor, with the other meal and cut straw or hay.

In continuance of the Woburn experiments 98 oxen, 348 sheep, and 80 hogs were fattened on a great variety of food. Not only was the increase of the body ascertained, but the increase of the carcass, of all the offals, in the lean and fat state, and, in fact under all possible condition. Some of the results are as follows:

Fattening oxen, well fed on cake, corn, roots, and hay or straw, will consume 12 lbs. or 13 lbs. of the dry substance of such a mixture per 100 lbs. live weight per week, and should give 1 lb. of increase for the 12 lbs. to 13 lbs. of dry substance so consumed, even allowing the dry substance to contain as much as 5 heat-givers to 1 flesh-former.

Sheep will consume 15 lbs. of dry substance to every 100 lbs. of live weight per week, and yield 1 part increase for 9 parts of dry substance consumed.

Pigs fed liberally on food consisting chiefly of grain, will eat 26 lbs. to 30 lbs. per 100 lbs. live weight per week, and should yield 1 lb. of increase to 4 lbs. or 5 lbs. of dry substance consumed. With as much as 5 or 6 parts of heat-givers to 1 of flesh-formers the animals will become very fat. If the proportion is less than 5 to 1 the carcass will be more fleshy and less fat.

In proportion to their weight oxen have much larger stomachs than sheep, and sheep larger than pigs. Moderately fat oxen should yield 58 to 60 0/10 of carcass to live weight, and fat oxen 65 to 70 0/10.

Fairly-fat sheep should give 58 0/10, and fat sheep 64 0/10 of carcass to live weight. Porkers from 80 to 82 0/10, and fat pigs considerably more.

In lean animals water in carcass 54 to 62 0/10 — in fat

(1) On the farm of the very public-spirited Duke of Bedford.

animals 40 to 50 0/10. Bone to carcass on a fat ox 11.3 0/10, fat sheep 8.9 0/10, fat pig 4.0 0/10. In the pig alone the head is included.

I subjoin a table of the weights of different organs of the various animals experimented upon.

Offals.	Mean of 16 heifers.	Mean of 249 sheep.	Mean of 80 pigs.
	lb oz.	lb oz.	lb oz.
Stomach,	35.14	3.12	} 2.10
Contents of stomach,	92.13	7.10	
Caul fat,	23. 3	7. 2	1. 2
Small intestines,	17.12	2. 8	4. 8
Large "	11. 7	2.15	8. 6
Intestines fat,	21. 5	2. 2	2. 6
Heart, &c.,	5.11	0.10	0.10
" fat,	3. 4	0. 8	.....
Lungs, &c.,	9. 4	1. 8	1. 9
Blood,	45.13	6. 2	7.10
Liver,	14.13	2. 5	3. 5
Gall,	1.00	0. 2	0. 2
Sweetbread,	1. 1	0. 3	0. 7
Heartbread,	0.11	.....	.....
Throatbread,	0. 6	.....	.....
Melt,	1.14	0. 4	0. 5
Bladder,	0. 9	0. 1	0. 3
Brains,	0.12	.....	.....
Tongue and head,	30.11	4. 8	1. 0
Hide, skin & wool.,	84.10	18. 0	.....
Feet,	20. 1	.....	0. 3
Tail,	1. 2	.....	.....
Skirts,	5. 2	0. 3	.....
&c.,	3.15	0. 3	1. 0
Total,	430.14	61.12	35. 5
Carcass,	680.12	91.13	176. 5
Loss,	20. 7	0. 1	1. 2
Live weight			
after fasting,	1141.1	153.10	212.12

ARTHUR R. JENNER FUST.

A Model Percheron Norman Horse.

We copy from the London *Agricultural Gazette* the following exact description of a good *Percheron*. It is a great pity that those imported into our Province a few years ago should have been selected with so little care, as the result has been prejudicial to the crossing of our French-canadian mare with the horse which suits them best. In the Western states, where a better selection was made from France, the best of results have been obtained, and the *Percheron* breed there is becoming very popular amongst the farmers.

Head clean, bony, and small for the size of the animal; ears short, mobile, erect and finely pointed; eyes bright, clear, large and prominent; forehead broad; nostrils large, open, and red within; jaws rather wide; chin fine; lips thin; teeth sound and even. Neck a trifle short, yet harmoniously rounding to the body; throttle clean; crest rigid, rather high, and gracefully curved; mane abundant, with silky hair. Breast broad and deep, with great muscular development, shoulders smooth, and sufficiently sloping for the collar to set snug to them; withers high; back short and strongly coupled; body well ribbed up, round, full, and straight on the belly, which is much longer than the back; rump broad, long, and moderately sloping to the tail, which is attached high; hips round and smooth at top, and flat on the sides; quarters wide, well let down, and swelling with powerful muscles. Dock strong, tail long, heavy, and gracefully hanging out from the croup when the animal is in full motion. Legs flat and wide, standing square and firm, and well under the