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a woman artist in New-York was most artistically treated. It was painted a dull green. The back and the lld of the pended in its production. seat where upholstered in an effective gold colored tapestry drawn over a padding of hair and held down by gimp and gilt nalls, making a most artistle seat, or table, as it use for either was required. Another one was stained green, and ses of the ashes of the animal bodies, it on the back and lid of seat was used na tural toned burlap, with stenciled grif fins in dark brown as a decoration.

These tables may be treated in various ways to suit their surroundings. It is suggested in the Decorator and Furnisher that one stained the natural oak and upholstered in green rep, turcoman, corduroy, burlap or denim would be most attractive, or for green substitute to S per cent, or more. brown in the same materials and put on with dull brass nails, making an effective seat for a hall.

would be charming in a blue and white and sheep rather more than pigs. It is dining room.Upholster in dark blue de seen that the entire body of the fat calf the feeder would be enabled to calnim with white nails, and fill with a number of pretty pillows in various designs of blue and white, and one of vivid scarlet to give a warm touch, which 11, and of a moderately fattened pig buys or sells, and of the fat ones he is needed in these coluiy decorated also about 11 per cent of nitrogenous rooms.

The lovely liberty chinzes in dark blue and white, sometimes yellow, red and white on blue, are good to use on these screes, which are first painted black. W. PLOUGHMAN.

Science.

THE ROIHAMSTED FEEDING EXPERIMENTS. (Continued.)

Nitrogen in oxen-mineral matter in beasts-fat in sheep, &:- composition of increase.

Calculation leads to the conclusion that about one-sixth of the whole of the nitrogenous matter of the collective offal parts of oxen, will, on the average, be consumed, but that the whole of the hitrogenous matter reclaimed as food from the offal parts will fall short of the amount contained in the bones of the carcass. So nearly, however, will fat sheep 45% per cent, and that of the these quantities balance one another, specially if a portion of the gelatin from the carcass bones be consumed, that it may be assumed that, of the total nitrogenous substance of the bodies of these animals, only about as much as, or very little more than, is represented by the total amount in the carcasses, will be consumed. In the case of pigs, however, a larger proportion of the total nitrogenous substance of the body will be consumed that in that of other animals; but, as the table shows, the percentage of total nitroge nous substance is less and that of the fat much greater in the plg than in the other animals.

Upon the whole, therefore, it would seem that the proportion of the consumed nitrogenous substance will, on the average, be greater than its proportion in the total carcasses of the fattened animals. Such is pretty certainly the case in our own country, but the relations are admittedly far otherwise in the United States, and it is, to say the least, very questionable whether the difference is to the advantage of the consumers in that country.

Lut us now turn to the lower division of Table 6S showing the composition of the entire bodies of the animals,

with the composition of the food ex-

As was the case in the carcasses, there is also in the entire bodies a marked diminution in the percentage of mineral matter as the animal matures. Judging from the results of the analymay be stated in general terms that about, or rather more than, 40 per cent of the total mineral matter of the animals is phosphoric acid. In the case of oxen and sheep nearly 45 per cent, and in that of pigs about 40 per cent, will be lime, while of potash, the ash of oxen and sheep nearly 45 per cent, and from 5 to 6 per cent and that of pigs 7

Of total nitrogenous compounds, as well as of total mineral matter, oxen

seem to contain, in parallel conditions, Another, painted white and enameled, a rather higher percentage than sheep, contained about 15¼, that of a moderately fat ox 1412, of a fat lamb 12 1-3, of the truth for all practical purposes, the a fat sheep 12%, of a very fat one about substance. The store or lean animals contained from 2 to 3 per cent more than moderately fat ones.

> The figures show, on the other hand, that fat constitutes by far the largest animals, especially of those fit for slaughtering as human food. Even the half fat ox contained about 19 per cent of fat, or more than of nitrogenous substance. The entire body of the store sheep also contained nearly 19 per cent of fat, that is several per cent more than of nitrogenous substance ; that of the half-fat old sheep 23½ per cent, or more than one and one-half times as much as of nitrogenous substance; and that of the store plg also more than 23 thirds times as much as of nitrogenous substance.

Of the fattened animals, the entire body of the fat ox contained rather more, and that of the fat lamb rather less, than 30 per cent of fat ; that of the fat sheep 35½ per cent, of the very fat calf, however, contained even rather less than 15 per cent of fat.

Thus, the entire bodies, even of store or lean animals, may contain more fat than nitrogenous compounds, while those of fattened animals may contain several times as much. That of the fat ox contained more than twice as much, that of the moderately fat sheep nearly three times, of the very fat sheep more than four times, and of the moderately fattened pig about four times as much fat as nitrogenous substance.

In conclusion on this point, all the experimental evidence concurs in showing that the so-called "fattening" of animal is properly so designated. During the feeding or fattening process, the percentage of the total dry substance of the body is considerably increased. and the fatty matter accumulates in much larger proportion than the nitrogenous substance. It is evident therefore, that the increase of the fattening animal must contain a lower percentage of nitrogenous substance and a higher percentage of both fat and total dry substance, than the entire body of the animal.

It is obvious, however, that the results of the analyses of the 10 animals

window seat. One in a pretty studio of this, therefore, that is of most interest tions in which they are dealt with in from 35.9 in the very fat condition, and to the farmer to consider in connection practice, or of their increase over any given period under varying conditions of feeding. Accordingly, we have constructed tables founded on the analytical results above referred to, showing the probable average percentage composition of the different descriptions of animal, each at eight gradationary points from the store to the very lat condition ; and the factors thus obtained have been applied for the calculation of the composition of the increase in a number of cases of ordinary practice, or of direct experiment in which the weights of the animals at the commencement and at the conclusion of a fixed period, the general character of the food they consumed, and their final condition were more or less fully known. It is admitted that these eight conditions do not cover all the variations of composition occuring in actual practice; but at the same time there can be no doubt that by the aid of such factors culate with sufficient approximation to composition of the store animals he sells. At any rate I believe that the results are the best that existing knowledge enables us to provide.

> It is impossible to go into any detail here, either as to the composition of ot the farm. the animals at the different stages or to item in the dry or solid matter of the the estimated composition of their insummarised as follows:

> > In the case of oxen the figures repre at different stages of progress show that the percentage of mineral matter ranged from 5.15 in the store to only 2.43 in the very fat condition; that of the store to only 13.1 in the very fat from 11.7 in the store to 37.4 in the very total dry substance increases from only condition. Lastly, the percentage of very fat condition.

reductions the fat increases from 14.5 in the store sheep than in the store ox, owing to the less amount of mineral Similar results relating to sheep lead and nitrogenous matter in the store higher percentage of dry substance in ox, owing to the higher percentage of the percentage of water diminishes from 60.8 to only 35.2.

The results relating to the composi-

(excluding contents of stomach5, etc.) a reduction; in the percentage of water from 58.6 to 34.4.

It may be observed that in no case do the percentages of toun ary substance and of water make up 100; the difference being represented by the contents of stomachs and intestines, the amounts of which found in the animals actually analysed are taken as the basis of the estimates for the amounts in the other conditions, just as in the case of the other constituents of the body.

I will next summarise very briefly the results of the application of these cata as to the composition of the animals in different conditions for the purpose of estimating the composition of their increase, in passing from one condition to another.

First, referring to oxen, the composition of their increase during the feeding process has been estimated in the case of the recorded results of actual practical feeding, in some cases of large numbers of animals, and over considerable periods of time. Other cases have been those of results obtained at Rothamsted or under Rothamsted superintendence, mostly in direct feeding experiments, but sometimes in the feeding of animals in the ordinary practice

Reviewing the whole of the results, the indication was that the composition crease, but the results may be briefly of the increase of moderately fattened oxen during a final fattening period of several months will contain about, or a senting the composition of the animals little more than, 1% per cent of mineral matter; seldom more than 7 to 8 per cent of nitrogenous substance; and seldom as little as 60 and generally near C per cent of fat; whilst the total dry the nitrogenous substance from 1S in substance of the increase will generally range from 70 to 75 per cent. In the state; and that of the fat increased case, however, of oxen fattened very young, and the feeding period extendper cent of fat, and about one and two fat condition. Again, the percentage of ing over a much longer time, similar calculations lead to the conclusion that 33.8 in the store to 54 in the very fat the growing and fattening increase of such animals may contain perhaps 24 water decreases from the store to the per cent, or more, of mineral matter, against only about 1½ per cent over a The parallel results for sheep show limited final period of more purely that the percentage of mineral matter fattening increase; about 10 per cent ranges from 3.25 in the store to only of nitrogenous substance against only 2.90 in the very fat animal; the nitro- 7 to S per cent in the only fattening inchous compounds from 15.5 per cent in crease, and perhaps only from 50 to 55 the store to only 10.9 per cent in the j ci cent of fat against from 60 to 65 very fat condition, and against these per cent in the more exclusively fattening increase. In fact, while the growper cent in the store to 45.8 per cent in ing and fattening increase would conthe very fat condition; and the total sist of about two-thirds dry substance dry substance from 33.2 per cent to and one-third water, that of the more 59.6 per cent. There is, therefore, a purely fattening increase would consist lower percentage of total dry substance of nearly threefourths dry substance and only about one-fourth water.

to the conclusion that during a final sheep. There is, on the other hand, a I-thiod of some months of feeding on good fattening food their increase will the very fat sheep than in the very fat generally contain not less than 2 per cent of mineral matter, and frequently fat in the sheep. Lastly, in the sheep more, that is, distinctly more than in the case of oxen, the quantity largely from the earliest to the latest stage depending on the amount of wool. Of nitrogenous substance, the final fattening increase of sheep will probably tion of pigs showed a reduction in the seldom contain more than 7 per cent percentage of mineral matter from 2.93 and frequently somewhat less. In other in the store to only 1.14 in the very fat words, notwithstanding the large condition, and a reduction in that of amount of nitrogen in the wool of nitrogenous substance from 14.4 in the sheep, their fattening increase will stere to 9.5 in the very fat state. But, probably generally contain less nitroinstead of a reduction, there is an in-genous substance than that of oxen. crease in the percentage of fat from IS.6 On the other hand, the increase of well in the store to 51.6, or to more than half fed and moderately fattened sheep will do not supply data directly applicable the weight of the body, in the very fat generally contain nearly and somewhich of course, represents the gross for the estimation of the composition condition, and there is an increase in times more than 70 per cent of fat product of the feeding process. It is of animals in the very various condi- the percentage of total dry substance against an average of less than 65 per