we supply it, and we might be inclined to say, that the warmer it is kept the better, but practically there is a limit to this. There isa certain. range of temperature which is natural to the animal, and though in the process of fattening, we place an animal to a certain extent in an unnatural condition, we cannot carry this too far without producing various derangements of the system, which would speedily end in positive disease. Our object must be, to sustain only a certain proportion of the internal temperature by external warmth, for the production of a considerable part of it, by the combustion of the food within the body is connected with, and essential to the healthy performance of the animal functions.

But there is also another source of waste of food, which these improved means of housing are also calculated to prevent. It has been ascertained that not only is the temperature sustained at the expense of the food, but that every movement of the muscles produces also a certain consumption of it. If we sit still for an hour a certain amount of the food we have swallowed is consumed or burned off in our bodies, and it can actually be measured, by particular and very complicated chemical experiments, but if we run violently, or engage in any active or muscular exertion, the quantity which undergoes combustion is greatly increased. Now, obviously, if we confine a number of cattle in a large court yard which admits of abundant exercise, we produce the conditions of an increased and uneconomical consumption of food; while, if we confine them in a small space, we diminish the muscular exertion and consequently the amount of food which is wasted by it. This is what is actually carried into effect by the use of hammels, stalls, and boxes, which, by the smallness of their space, prevent the animal taking an undue amount of exercise. In this, however, as in the former case there is a limit, for exercise to a certain extent is absolutely requisite, to the healthy performance of the functions of the animal. The object, therefore, of the careful feeder, is to reduce the consumption of food by these two necessary processes, to the smallest quantity consistent with the perfect health of the animal; and, I need scarcely say, that practice is here fully consistent with theory, for the speakers, one and all concurred in upholding the superiority of the methods adapted to secure these results; while they all condemn the use of open courts, which expose the cattle to the vicissitudes of the weather, and admit of active exercise.

Minor differences of opinion, however, exist as to which of the other methods of housing presents the greatest advantages, but those differences, as Mr. Elliot remarks in his observations, may be readily and fairly attributed to differences of climate and locality; for, while hammels which permit a certain amount of exposure to the weather, may be quite successful in a low and sheltered locality, they may be equally unsuited to an upland and cold district. The balance of opinion, however, is in favour of box feeding, which is well spoken of, by all those who have given it a fair and extended trial. It fulfils, in fact, all those conditions to which we just referred, and possesses the important practical advantages, of economy in the expenditure of labour in feeding, and the production of a manure of superior quality. The superiority of manure, though referred to by several speakers, is not discussed in detail; nor, so far as I know, are there at the present moment any satisfactory experiments to substantiate it, and though I think it probable, that a certain degree of superiority is produced, I should on theoretical grounds, hesitate to express a decided opinion. It is most desirable, however, that we should obtain facts which may enable us to do so, and I would suggest the subject as one which merits examination by careful experiment on the farm.

The second part of the subject, the method of feeding, was not gone into in such full detail, as it was one of the discussions of the previous year, but various observations fell from the different speakers which are deserving attention. Mr. Elliot insists particularly, on the advantage of giving a considerable variety of food; and this, which is his opinion founded on actual experience, is fully borne out by science, and is peculiary interesting to me, as I have more than once pointed out this, on the theoretical grounds, as a proper practice. Theoretically, the more we can vary the forms in which the elements of food are supplied to the animal, the more likely are we to promote active and healthy digestion, as well as to hit the proper proportion, in which these different constituents ought to be present.

It has been established, that there are two great classes of compounds which the food must contain; one of which including the saccharine and oleoaginous substances, form the true fuel of the animal body, of which one part goes to sustain its temperature, while another is laid up in the system in the form of fat, to be used as fuel in any emergency, to which the animal may at a future period be exposed. The other class, includes what chemists call the albuminous or proteine compounds, which go to the production of the true flesh or muscular fibre. Now the successful fattening of the animal can only be effected, by supplying it with food which contains both classes of constitutents in certain proportions. All the substances employed in feeding are not of this kind, and we require therefore to mix them together, so that the deficiencies of the one may be made up by the other. Mr. Christie has given us a curious illustration of this; on one ocassion, when beans were extremely cheap, he gave 6 lbs. each to a lot of sixty cattle, and he found that for several months they did well, but about the end of that period their coats became rough, they appeared not to relish their food, and some of them refused it entirely. Now, in this case, there was supplied to them a quantity of food, rich in albuminous, but deficient in saccharine or oily elements, and the proper proportion of these two being thus deranged, the functions of the animal were imperfectly performed; but no sooner did Mr. Christie reduce the quantity of bean meal to 2 lbs., and substitute for the remainder, 4lbs. of oilcake, than they immediately began to improve, and were sold in excellent condition. But even when the proper proportion is preserved, much advantage must be derived from varying their food, because the albuminous, oily, and saccharine matters, are not chemically indentical in all, and it is consistent with all we know of the phenomena of nutrition, to afford to the animal a supply of them in as varied forms as we can.