on animals. They knew that in laying down bones on grass lands, it was generally preferred to boil them, particularly on dry soils; and so the food administered to animals produced a different effect according to the state in which it was given. Hence the use of prepared food had now become very general; and he would give them one practical illustration of the value of prepared food. A friend of his had adopted the practice of feeding his cattle on prepared food with particularly good results; he boiled 2lbs. of linseed in four gallons of water, and mixed 10lbs. of cut straw and 5lbs. of ground corn with the jelly, and gave it to them in two messes, alternately with two feeds of Swedes of 50lbs. each, per head per day; and the results of the plan was most remarkable. On the old system he grew about forty or fifty acres of turnips, and sold about 120 fat beasts per year; but by adopting the prepared food he had been enabled to sell and fatten double the quantity of cattle on the same quantity of turnips as he grew before; he obtained a greater quantity and much more valuable manure, and of course his corn crops benefitted in proportion. Another effect of the prepared food was this: whenever they went to look at the cattle they were always lying down, and they never rose till their fresh mess was brought them. The lessening of the time of feeding the cattle was another advantage, for if a certain portion of food was always required for the mere sustaining of the animal as distinct from that which went to the increasing of fat it was clear that if a beast could be fattened quickly so much of the food which was applied to the sustaining would be saved. If a beast was fattened in three months instead of six of course all the food applicable to the mere sustentation for three months would be spared. Thus the cost of production was largely decreased, the money turned over more rapidly, double the number of cattle were sold, and his grain crops were benefitted by the additional manure. They all knew that the droppings of cows fed on oil-cake were better for land than the ordinary manure; but he had heard of instances where the crops of barley had increased in a three-fold ratio where manure from prepared food had been used as compared with the ordinary farm yard manure. In addition to these things in fattening cattle other matters must be attended to. There must be sufficient warmth, shelter, the avoiding of annoyance, ventilation, absence of light, all important, and all would be attended to by the man who studied agriculture to good advantage. There was one point of view in which he now wished to place draining before them as it related to the feeding of stock. He had mentioned last evening that the plants grown on undrained land were of a cold temperature, and this peculiarity also communicated itself to every thing that fed on those plants. The temperature of the field affected the temperature of all that grew upon it, and the deprivation of warmth had a pernicious effect in the feeding of cattle. The grass grown on drained land went much further for the purposes of fattening than that grown on wet land; and thus every breach of the rules of good husbandry brought with it its own punishment, and that too in more respects than one. He would now only direct attention to one other purpose for which cows were kept—they were kept not only to be fed, but to yield milk. Now a milk cow required to be sustained, though it did not require to be increased in weight; and as what they consumed was something more than went to make up their own bulk—for it served to form milk, in which was contained butter and the curd of which cheese was made—it was necessary that their food should partake largely of the essential qualities of that which they were required to produce. Now curd and butter were almost identical in chemical qualities with the gluten and oil obtained from oats. The analysis of milk in 100 parts gave the following result:—

Caesein.....	4.48
Butter.....	3.13
Sugar of milk.....	4.77
Saline matter.....	0.60
Water.....	87.62

And whatever would increase the production of beef would increase the production of rich milk. In the neighbourhood of large towns the dairyman did not care so much for the quality of the milk as for the quantity, and he therefore gave his cattle food containing large quantities of water, such as mashes, brewer's grains, and turnips, applying this salvo to his concience, that he was putting the water into the stomach of his cattle, instead of putting it into the milk after it was produced: but when the milk was required for the production of good butter and cheese a different kind of food was used. Hence oil-cake was given, which produced a large quantity of butter; Indian corn also procured the same result; and oats, which contained both fat and gluten, he understood were principally used in this district. Beans and peas were sometimes given; but although these contained a large proportion of gluten, there was little if any fat in them; and indeed there seemed to be no reason for doubting, that of all the grain grown in this country, oats were the best adapted for a dairy stock, because they contained the largest quantities of that which went to form both butter and curd. There was one point of considerable consequence in connection with the keeping of a dairy stock; and it was this, that whereas the animal that did not increase in weight restored everything that it took into the stomach, the dairy cow only restored that portion to the manure heap which went to sustain it: and to that extent was the land robbed of the materials with constituted milk. The Professor concluded by referring, in brief terms, to the treatment of sheep, and the importance of sulphur in the production of wool.