

cost of the food consumed to produce it. 2. That the main profit of feeding is in the manure thereby obtained. 3. That Canada has great advantage over Britain in meat production from the cheapness at which store cattle can be raised and sold. Any thoughtful Ontario farmer who ponders well this part of the report will come to the conclusion that those who sell their store cattle had much better keep them and fatten them on their own farms. The constant sale of grain and store cattle form the upper and nether millstone which is grinding the life out of many a struggling farmer in "this Canada of ours."

PREPARED AND UNPREPARED FOOD.

It has long been a much-debated question among feeders of live stock whether whole hay and roots, or the same article of food cut and pulped, form the more profitable diet. The experiments here detailed favour the system of cutting and pulping very decidedly. Cattle fed on unprepared food gained on an average 1.76 lbs. per head per day, while those that got prepared food gained 2.10 lbs. per head per day, being equal to one-third of a pound per head per day in favour of the prepared food. At the figures given in the report this would make a difference of about \$4 per head in favour of cutting and pulping, not a large sum in the care of a single beast, but amounting to a very considerable amount when multiplied by the total of all the cattle fed throughout the Province of Ontario. Professor Brown estimates it to be at least \$420,000. From this, however, would have to be deducted the cost of cutting and pulping, which would include outlay for the necessary machinery and attendance. Of these items, no estimate is given; but it is intimated that it is partly balanced by the fact that rougher, unpalatable, and even unsound kinds of food can be utilized by cutting and pulping, which would go to waste on the other plan.

TWO-YEAR OLDS VERSUS THREE-YEAR OLDS.

Another question at issue among stock-men is, whether it pays better to finish the fattening process at two years old or at three. This report details a series of experiments, which make the profit from a two-year old \$15.68, while from a three-year old it is only \$4.04. A Toronto paper, in commenting on this part of the report, suggests that the experiment shows less favourably than it ought in regard to the three-year-olds, in consequence of the actual cost of a fat two-year-old being taken as the basis for the third year's work. The cost of the two-year-old is given in the report at \$79.29. The paper referred to thinks it should not exceed \$40. This appears to be an undervaluation, but at any rate there seems to be a discrepancy here which needs further explanation. Professor Brown invites inquiry and criticism, and will, doubtless, give his best attention to this point.

DOES IT PAY TO FATTEN OR FEED CATTLE FOR MANURE PRODUCTION ONLY?

Professor Brown answers this question with a decided "yes." He makes the actual cost of the food given to a three-year old steer \$31.26, and he estimates the manure made from it at \$32.06. His manure valuation will be accepted by all practical farmers. It is as follows: A three-year old steer will produce seven tons of first-class, home-made manure, or mineral superphosphate. The Professor asks: "Would any experienced farmer give seven tons of such manure for one of bone dust or superphosphate?" He would not. In actual experience four tons of first class barn-yard manure is fully equal to one ton of the special fertilizers named.

THE VALUE OF A MANURE HEAP.

Perhaps the most important part of this report is the showing which it makes of the fact, for such it is, that it is actual cash which a farmer handles in turning over a manure-heap. It will indeed be,

as the Professor remarks, "a golden day for this or any country" when the farmer practically regards and treats a pile of manure as a pile of money. During the past winter the manure made at the Model Farm stables was accurately measured and weighed. Omitting details, it may be stated that the manure-heap comprised thirty seven tons. What would the ordinary farmer consider this worth? Let his practice answer. Our best farmers are willing to pay \$1 per ton for manure got at city stables. On an average of distances, they can haul two loads per day with a single team. Each load is, therefore, worth \$2.50 at what may be called farmers' valuation. This would make the pile worth \$1,342. But at commercial valuation, it is worth \$1.60 per ton more. This commercial valuation has been made by careful experimenting under a variety of conditions, and the Professor estimates the manure to have been worth about the same as the cost price of the food before it was eaten by the stock.

CONCLUDING OBSERVATIONS.

1. This report will repay study. The object of the present article is to awaken curiosity and interest in regard to it. There are topics of discussion raised in it sufficient to occupy Farmers' Clubs and Granges a good part of the coming winter. Do not be satisfied with this brief summary, but get the report and con it over thoroughly. It is tough reading, some of it, but will well repay close attention.

2. This report alone is conclusive evidence of the utility of such an institution as the Ontario Agricultural College. Only at such a place could these experiments be pursued. Look at their money value to the country. Suppose the Professor's conclusions as to prepared food for stock to be correct. Suppose, further, that they are generally acted upon. Result, upwards of \$400,000 profit vested by Ontario in a single year. Suppose again, the Professor's calculations as to the comparative profit of ripening up cattle at two years old to be correct, and to be reduced to practice. Result, the handsome profit of \$1,168,400 profit to the farmers of Ontario in a single year. Compared with these possible, and even probable gains, through the work being done at this institution, what a bagatelle is its annual cost of \$25,000 or \$30,000 a year. But this is only one department of its usefulness. Besides this, there are one hundred or more young men being trained to scientific farming to go forth as missionaries of improved agriculture throughout the length and breadth of the Province. The founder of this institution will surely get a gold medal some day—or, possibly, a national monument when he is dead.—*Western Advertiser.*

The preparation of the soil for rye is the same as for wheat, though it will do well in a poorer soil than wheat. A soil that is rich enough for a good crop of rye, can be made, in many cases, to produce a more paying crop by adding a dressing of 300 pounds of any good fertilizer, and sowing it to wheat. The value of rye straw in some localities may make the rye crop, grain and straw together, more profitable than even a good crop of wheat. This only is the case near cities, where straw brings a high price.

A CHARGE of skimming and milk watering having been preferred against Mr. Benson Baldwin, one of the patrons of a cheese factory in London township, a meeting of the Board of Directors was called for the purpose of holding an investigation. Mr. Baldwin was present and acknowledged the truth of the charge, when the Board decided that he should forfeit his entire month's milk (4,024 lbs.), said milk to go to the benefit of the other patrons. Mr. Baldwin signed an agreement to this effect, when the matter was settled.

CURRENT NEWS ITEMS.

We are informed, remarks the *Huron Signal*, that a two-year old calf comes to the pump at regular intervals during the day on one of our farms since the dry spell, and seizing the handle of the pump tries to help itself to a drink. It insists upon remaining until water is given it.

THE thoroughbred Jersey City cow, called Pride of St. Croix, owned by Henry Vaughan, of St. John, N.B., and valued at \$1,000, died from the effects of eating a quantity of hard bread. The cow took first prize at the late exhibition, and has always been similarly successful wherever exhibited.

NEXT session of the Ontario Agricultural College commences on the 1st of October. The Matriculation Examinations begin on that date. Lecturing is to start on the 4th of the month. Candidates for admission should not delay sending in their applications. The institution bids fair to be filled to its utmost capacity, and before long, it will be found that a single college of this kind is not sufficient for the wants of the rising generation.

BEAR stories, says the *Durham Review*, seem to be quite plentiful around here just now, and if we believe all we hear, there will be fine sport hunting them this fall, and bears'-grease will be plentiful. The other day one was seen in the immediate neighbourhood of Rockville, and every male inhabitant of that thriving village at once turned out and went to the "bear hunt," but they all forgot to provide themselves with fire-arms, and if they had only come upon Bruin, they would either have had to run, or arm themselves with such weapons as nature provides. But although a thorough search was made, no bear was again seen.

WE find this happy bit in one of our exchanges: Somebody has suggested that the Canada thistle be adopted as our national emblem instead of the maple leaf. The idea is a good one, for there are more thistles in the country than maple leaves. It is disgraceful the way the law regarding the cutting of this pest is disregarded. A careless farmer is about the worst neighbour a thrifty one can have. He not only allows his own land to be overrun with thistles, but the seeds are blown into the fields of his neighbours, and the latter lose time and money in the vain attempt to keep their lands clear.

AN exchange says: It seems the farmers are growing the wrong kind of wool. The statement is made that 750,000 pounds of Canadian long stapled wool is at the present moment unsaleable. There is no demand for such class of wool. The manufacturers want a finer fibred and shorter stapled wool. The country wants other breeds than Cotswolds or Leicesters. The Southdown and Shropshire Down will give better mutton and finer and higher priced wool, or a cross of the native sheep with one or the other of these will improve the quality of both flesh and fleece, and thus put money in the farmer's pocket.

A MONTREAL produce dealer while in London lately was surprised to find Russian butter offered for sale in good sized quantities in several wholesale provision stores in that metropolis. He was at first inclined to be somewhat sceptical about this butter being the product of the Russ, but was soon convinced of the fact in more than one quarter. It was handsomely got up in white oak tubs, and very much resembled fine Canadian. "It is stated," adds the *Montreal Gazette*, "that butter and cheese factories have been started in quite a number of the Russian districts, and that the production of dairy produce upon scientific principles is likely to become a staple industry of that vast empire." This will sharpen Canadian producers to improve the quality of all their butter. There should be one grade; and all the rest should be consigned to the soap-makers.