

sure that neither this nor any other society could succeed or prosper which ignored altogether the guidance of an Almighty Providence; he took the toast, therefore, as such an acknowledgment, and he had much pleasure in responding to it. He had always taken great interest in watching the Society, for the intrinsic good which it had in itself. He had a very great opinion of a set of men who had one object or pursuit in common—who met together to consider and consult as to how they could best carry out the desired object. That object might be agriculture, or it might be the promotion of religion, or politics, or science, or anything else, but whatever it was, it was most likely to succeed if those who had it in hand met together at stated times to hear the results of one another's experience, and to profit, perhaps it might be by their own mistakes, or by the good success of others. The rev. gentlemen then referred to a meeting of the Church Congress that would shortly take place, and to another meeting that had just passed by—that of geologists and other scientific men in the neighbourhood of Settle—as gatherings of a similar purport to this, and eulogised the principle of intercommunication one with another to bring about the most beneficial results for the advantage of that portion of the community directly interested. To his mind it was one great desideratum that in these gatherings they should not all be of just one way of thinking. If they had a clique all of one set of opinions, they all confirmed and strengthened one another in their prejudices, but he felt sure that in agriculture, though he knew but little—far too little of the subject, it was best, as in other undertakings to have several opinions, from the discussion of which they could arrive at the best results to promote their prosperity. (Cheers.)

The Chairman then gave the 'Army, Navy, and Volunteers,' observing that they were a useful class of men, and he hoped they would be the means of ensuring peace and consequent prosperity to the country.

Major Morrison, M.P., in responding, said that this was one of the customary toasts presented on all occasions, and he supposed it had been drunk ever since toasts were first proposed in the English language. It was a very striking thing now for one to look back to a few years ago, to notice how very few people they were then to be found at a meeting of this description to respond to this toast, compared with the number of persons who were now seen in a position to do so. This was in consequence of the Volunteer movement, which had advanced with such rapid strides in this country. We were very different to continental nations. We kept up an army which appeared to be very large, and we also kept up a large navy, but that force was so scattered in various parts of the world, that the force we had at home to defend the country was only very limited. If we looked at the state of the world, and saw the enormous armies that were in Europe, and thought of the troubles that had come upon Europe and upon America within the last few years, we then found how true were the old proverbs—'To be forewarned is to be forearmed,' and 'Prevention is better than cure.' (Hear, hear.) As for the volunteers of which force he was a member, they had no intention on their part of trying to place themselves on a footing of equality with the regular services. The volunteer movement had been one of the most remarkable movements of the time, but they knew that the chief burden and responsibility rested upon the regulars, and they knew what they owed to these forces, and could not but think of them with gratitude and respect. So far as their own local corps was concerned, he believed that the Settle Rifle Corps was never in a more flourishing condition than at present. He believed it was the only corps in the kingdom that had not a single non-effective member on its books. (Cheers.) He would take that opportunity of thanking the gentlemen around him as representing the neighbourhood for the good feeling which had been displayed towards the corps. As one who took an active part in its formation he should be very sorry to see it come to the ground. (A voice: 'It won't,' and 'Hear, hear.') He trusted they would never again have occasion for the use of either the army or the navy. They might look upon them as necessary evils, but he hoped that while they viewed the state of affairs in other countries at the present moment, and saw the wars that were raging around them on every side, they would not be called upon to fight on their own account again, and would only have to thank themselves and the authorities who had put the army and navy into that efficient state in which they were found at the present moment.

Mr Preston briefly proposed the 'Lord Lieutenant and the Magistrates of the neighbourhood.'

Mr Luleby briefly returned thanks.

The Chairman said the next toast was 'Prosperity to the North Ribblesdale Agricultural Association.' He had only attended these meetings on one or two occasions, and therefore he was not in a position to criticise the Association or to say how it had progressed, but from all he had heard he might be permitted to observe that though the number of entries at the show to day had not been so great as it had been at other times, the quality of the animals shown had been so exceedingly good as to compensate, in the reputation which the exhibition deserved to hold, for the decreased numbers. He liked the object of these annual shows exceedingly, and if the farmers would only enter into competition more freely—not so much for the purpose of obtaining prizes as of comparing their stock and profiting by the success of their neighbours—it would be greatly to their advantage. He coupled with the toast the name of Mr Brown, the Treasurer of the Association.

Mr Brown said he felt great pleasure in responding to the toast, and thanked the chairman for the honour he had done him by coupling his name with it. He said he had always taken great interest in the Society, and it gave him greater pleasure now when he saw the immense improvements going on all around. He could say from what he had seen and heard it was decidedly the best show of stock they ever had. He regretted they were not better supported by the landed proprietors of the district; many of them did not subscribe and their tenants were taking premiums for improvements, &c., annually, but he trusted that, another year, they would all subscribe. He concluded by saying that he was determined, as long as he had power, the Society should go on.

Mr Farrer then in brief terms proposed the health of the 'Judges and the inspectors of farms,' coupled with the name of Mr Wood.

Mr Bromley returned thanks for the judges, and spoke very highly of the cattle in the farmers' class, and gave some good advice about breeding horses.

Mr Bibby, who has also been a frequent visitor, also spoke

very highly of the cattle, and he said he had never seen anything like the improvement there was in this neighbourhood.

Mr Wood gave a very interesting account of his round as inspector of farms, and fully bore out what had been said by Mr Brown as to the improvements in the stock and farms of the district. Over the whole district which he had visited, he was gratified to tell them that there was one uniform, gradual improvement effected in the cultivation of land, through the co-operation of landlords and tenants in many instances, and in others through the sole exertions of tenants. A great improvement was perceptible in draining and fencing. In many instances swamps and sluces had been dried up, and outlets had been 'suffed' up, whilst in some places there was no longer a snipe or a tewit to be seen. The outlay by tenants who occupied upon leases was surprising; whilst the outlay by tenants and landlords combined, was also very great. In premium No 1, for cultivation, draining, &c., stood the names of John Dugdale, of Skirtack, and John Fell, of Cravenidge, each of whom had done a great deal towards improving his farm. J Fell, however, had put in a great deal of sod draining, whilst John Dugdale had laid down an immense quantity of tile and stone—not a single sod. The work had been well done, and at a sufficient distance; he was satisfied that the land was thoroughly well drained, and he had no hesitation in awarding him the first prize. In premium 4, the first prize he had awarded to Luke Grime, of Bleak Bank, whose draining was from 3ft 6in to 6ft 6in. Nine acres of land had been entirely reclaimed by him. To Christopher Sedgwick, of Sherwood House, he had given the second prize, for a very good quantity of sod draining, in high pasturage, which, he was satisfied, would tell immediately. The third prize he had awarded to William Parsons, of Rathamell. With regard to the prizes for general improvement, he might state that on some farms as much as nearly £1,000 had been laid out within the last four years. At other places, between £400 and £500 had been expended, and on the farm to which he had awarded the first prize, nearly £500 had been laid out by the tenant. The first prize in this class was awarded to M Hutchinson, of Little Newton, and the second prize to T Foster, of Hazel Hall, near Clapham, who had laid out a considerable sum, entirely at his own expense, and who had done much good to his farm. The third prize he had awarded to William Wolfenden, of Wigglesworth Hall. His landlord had laid out about £800, and the tenant himself about £100. With regard to turnips, when he left home for the purpose of inspection, he found in some places small tops; but as he proceeded further, he met with many fields, in which the turnips were good both at top and bottom. The first turnips he inspected likely to turn out good were at Anstwick, but he found better than those at Close House, and still better at Beck House; whilst those at Swinden Hall surpassed them all. He therefore awarded Mr Hartley the first prize, and Mr Newsholme the second. The speaker further dwelt upon the improvements which were taking place in all branches of agriculture, and concluded with a few general remarks on the prospects of the county.

The following toasts were afterwards disposed of—The Successful Competitors; the Unsuccessful Competitors; the Secretary, Treasurer, and Committee of the Association; the Visitors; the Town and Trade of Settle; the Ladies; the Labourers, proposed by Mr J Preston, jun.; the Band of the North Craven Rifles, coupled with the name of Mr G Stansfeld, jun., who briefly acknowledged the toast.

We cannot conclude without congratulating the working members on their success, as the meeting passed off very agreeably in every respect.

PRIZE ESSAY.

The Silver Cup, value £5, offered by John Yorke, Esq., the President for 1864 for the best Essay on Rearing and Feeding Stock, was awarded to Mr. W. Shepherd, of Settle, for the following Essay.

The rearing and fattening of cattle being of such vast importance not only to those immediately engaged in the business, but likewise indirectly to the community at large, it behoves those who supply an article that forms so considerable an item in the expenditure of almost every household to inform themselves well of the general principles which regulate the birth and promote the fattening of stock, so that they may be able to bring into market the greatest amount of stock with the least expenditure of food. This system of economy is beneficial alike to the producer and to the consumer, by increasing the profits of the former, and reducing the price to the latter.

In the following remarks, attention will be chiefly directed to these general principles, leaving each individual stock-keeper to apply them as seems best adapted to his circumstances and convenience, as it is every year becoming more necessary for farmers to be acquainted with the natural laws which affect their business, to enable them to follow it profitably; the system followed by our Grandfathers in their farming operations will be found no more suitable for the present age than would their method of carding and spinning wool.

For the healthy development of the animal frame, air, exercise, warmth, and proper food, are the great requisites, the want of attention to which is doubtless the reason why such a large number of calves die every year within a few weeks of their birth. Indeed, after visiting most of the places where calves are housed, any one moderately gifted with the sense of smell will be more puzzled to give a reason, why so many escape death, than why so many die. The air which the poor animals are compelled to breathe is so largely impregnated with the poisonous matter arising from the decomposition of their excretions, and the carbonic acid given off by their breathing, without at the same time any adequate ventilation being provided for the purification of the place, that few persons except the initiated can bear to breathe for more than a very short time the atmosphere which these animals are almost constantly breathing, during the first few months of their lives. Is it to be wondered at then, that disease and death so frightfully prevail, and diminish so largely the legitimate profits of the farmer?

The venous blood, which ought to mix with pure air in its passage through the lungs in order to get rid of the impurities it has collected in its journey and be again made fit to circulate life and health to every part of the body, is obliged to mix with air that cannot combine with, and carry off the used up and poisonous matters of the body, but instead, supplies what ought to be the vital fluid with an additional quantity of poison, which in the course of its circulation disturbs the healthy actions of all the organs in the system, producing diseases varying in character and intensity, according to the quantity and kind of poison inhaled, and the greater or less amount of natural resistance which the vital powers of the animal oppose to everything which tends to injure its health.

Exercise for young stock is of greater importance than is generally imagined. Without a considerable amount of exercise, the bones and constitution is therefore unattainable; a stunted badly formed animal must almost necessarily follow deficient exercise.

Every farmer knows that a certain degree of warmth is necessary in rearing young stock; and many contrive to provide it at the expense of pure air, by putting a large number of animals in a small space; but as warmth depends upon the healthy digestion of food and the breathing of pure air, more than upon the outward temperature, whatever interferes with the healthy performance of these functions, must tend to lower the heat of the body, notwithstanding the increased outward heat produced.

In discussing the question of food, it will be well, in the first place to consider the nature and capabilities of the different elements contained in all kinds of food, as this will assist us greatly in forming a sound

judgment as to the best and cheapest sort of food for feeding, as well as for growing purposes.

Every description of food may be divided into two great classes; first, that which is called nitrogenized food, and which strictly speaking is the only kind that nourishes the body, as unless food contains nitrogen it cannot form blood, flesh, bone, sinew, &c., consequently, no growth of the living organism can take place. Second, that which is called respiratory or fuel food, containing no nitrogen, used either to furnish internal fuel to keep up the heat of the body, or is deposited upon the muscles, or flesh in the form of fat.

These two classes of food, must be supplied to every animal and we find that an infinitely beneficent Creator has wisely ordained that the earth shall bring forth these two kinds combined, in every plant adapted for their sustenance; and that in every animal secreting food for the nourishment of its offspring, the same combination shall invariably be found. Thus, in milk we find the flesh and bone forming compound, caseine, or cheesy matter, combined with sugar of milk and butter, which can produce heat and fat, but no flesh or bone.

In wheat, oats, barley, peas, beans, grasses, &c., we find gluten, fibrine, albumen, caseine, with which to build up the solid structures of the animal; and sugar, gum, starch, oil, &c., to be used as fuel in the process of respiration (breathing) or stored up in the body as fat, either to grace the butcher's stall, or to serve the wants of the animal itself, if any casualty should deprive it of the food necessary to keep up the natural heat of the body. Under such circumstances it is always observed that the fat first disappears, and that a lean animal dies in a much shorter time than a fat one, evidently because it does not contain within itself the same quantity of fuel (fat) to keep the fire in (the body warm), it therefore dies out, precisely for the same reason that the kitchen fire dies out when the fuel is finished.

Milk is the type of every aliment fitted for the growth of animals, being that which nature herself, with unerring wisdom provides; hence, all artificially prepared foods, should as nearly as possible resemble it. Now milk contains two parts of heat producing elements, for every one part of flesh forming elements; and the nearest approach to this proportion is in beans, peas, and linseed, which are in proportion of about two and a half to one; next come oatmeal, barley, and wheat-flour, varying from seven or eight to one, to four or five to one, whilst potatoes, turnips, mangle wartsel, &c., contain from 10 to 12 parts heat producing food to one part of flesh forming food.

Difference of soils, or manuring, will of course make a variation in the above proportions, but they are sufficiently exact to indicate the kind of food that the farmer can best substitute when necessity or the price of butter requires him to depart from nature's laws. If the cream must go to the churn, the best substitute to be added to the skimmed milk is an infusion of linseed, as it contains that which has been taken from it, namely oil. If a more complete substitute be desired, peas or beans contain the caseine, linseed the oil, and a small portion of sugar added to an infusion of these will produce as perfect a substitute for milk as is practically attainable in a farm house.

The principles laid down in the foregoing remarks, so far as regards air, warmth and food will apply equally to the fattening of stock; this is not the case however with exercise.

Every action of the body, however trivial, is followed by the destruction of some portion of the living structure, so that not a limb can be moved, an ear raised, a sound uttered, or even the involuntary act of breathing performed without this inevitable death of the parts brought into exercise. This dead matter is as quickly as possible carried away by the veins to be renewed with new life-giving powers at the lungs, the arteries as quickly replacing it by depositing living matter where it is required; and as this living material has to be prepared out of the food consumed, it is quite clear that the more exercise the animal is allowed to take, the less flesh will be formed from the same amount of food. The aim of the feeder being to increase the weight of flesh as well as of fat, his attention may be profitably directed to this matter; for a full comprehension of this, and of the subject of animal heat, will enable him to produce a much greater weight of flesh and fat from a given quantity of food, than he would otherwise do.

Animal heat, like heat in our fire-grates, is produced by combustion in the oxygen of the air, of bodies containing what are called carbon and hydrogen. When coal is put on the fire, and a free supply of air allowed, the carbon and hydrogen of the coal combine with the oxygen of the air, forming carbonic acid gas and water, at the same time giving out a great amount of heat. The water and gas are carried up the chimney, and the heat is taken through the room. In almost a similar manner when an animal takes food, the carbon and hydrogen of some portion of it combine with the oxygen of the air at every inspiration, forming carbonic acid gas and water, which are expelled every time the lungs are emptied in breathing; the heat produced during this process of burning the fuel-food being diffused through the body.

Now, all heated bodies are subject to the same general laws, losing heat when surrounding objects are colder than themselves, and receiving heat when they are warmer. For example, if we wish to raise the temperature of a room to say 60 degrees, it is quite certain that we shall require more heat, and consequently more fuel to accomplish this purpose, when the thermometer stands at 40 degrees, than when it is at 60 degrees of heat; and it is equally certain that if we feed an animal in an atmosphere of 40 degrees, it will require more fuel-food than if fed in an atmosphere 20 degrees warmer.

It is essential that the temperature of the body be kept up to 100 degrees or nearly so, otherwise death is inevitable. As this is many degrees warmer than the atmosphere in which stock is fattened, it is obvious that the animals must always be giving off a portion of heat to surrounding objects, and that the amount of heat thus lost must increase as the temperature decreases, and as we have before shown, that this increased heat requires an increase of food for its production, it follows, that the weight of an animal fed on a given quantity of food will increase, or diminish, in proportion as the temperature of the place in which it lives, rises or falls.

How far the consideration of this subject may influence the practice of feeders, experience alone can determine, but it seems more than probable that if an economical apparatus for warming farm buildings were adopted, the saving in food thereby effected would very much exceed the cost of the fuel consumed.

As the quantity of fat is measured by the difference between the amount of food digested and the amount consumed by the oxygen of the air, during respiration, it will be found that animals with narrow chests and small lungs feed faster than those having large lungs, because they take in less air, burn less fuel-food, and are consequently enabled to store up more in the shape of fat. Thus the pig having comparatively small lungs fattens rapidly, whilst the large lunged greyhound or racehorse cannot easily be coaxed into fatness.

As regards the different descriptions of food to be used for feeding, much of course depends upon their relative prices. Linseed, Rape, and Cotton cakes are well known to possess high feeding properties; though the two latter are not so much used, as their being less palatable than linseed cakes, probably on account of their being less palatable than linseed cakes, but this hindrance to their use will no doubt in time be removed.

Their efficiency as fat producers depends chiefly upon the oil and starch they contain, and since one pound of oil is equal to two and a half pounds of starch, the advantage of good unadulterated oil cake over wheat, barley, or oats, appears considerable. This advantage is, however, in practice, more apparent than real, as there is very little, if any, really genuine cake in the market, and when secondary qualities of grain are of low market value they will be found the more economical food.

FADED FLOWERS.

How sweet the roses are, how gay!
Yet in an hour they pass away;
Their scent, their beauty, and their grace
Lost in immeasurable space.

Then, shall we hope again 'inhale
Their fragrance who have passed the Vale;
Again to greet the friends that were
Short-lived as roses, and as fairs?

Oh yes, we shall! the word is sure
To those who to the end endure;
Relying on th' Almighty power
Of Him who guards the passing hour.

Oh, may we all possess the grace
Which fits us each to see His face;
And sing the ever blessed song
With them and the un-number'd throng