

mentary particles are obtained which secrete the milk, so it stands to reason, that if the diet does not properly contain these substances the milk must more or less, be without those nutritious matters so essential to the growth and development of the young animal; and in due accordance with the degree of nutriment the milk possesses, the health and the strength of the constitution, and the proportionate dimensions of the body are affected to a beneficial or an injurious extent; all in fact, depends on the treatment the animal receives during its first period of life after birth. It is an excellent plan to give suckling ewes, when they are fed on turnips during the winter, some bean or pea meal, linseed or oil-cake, as an integral portion of their daily provender. These materially improve the condition of the secretion of the milk; the young lambs thrive well in consequence, and they fatten and grow more rapidly than when they have not this addition, besides which the ewes themselves are in a much superior condition in the spring season.

When the farmer is desirous of fattening calves for veal, he should attend to the following particulars;—1. The calf ought to be of a moderate size, such as is sure to please the modern picture. 2. The animal is to be kept in a state of perfect quietude. 3. As warm as circumstances can possibly permit; this last rule is very essential, as it prevents those elementary principles which form and secrete the fat being lost. 4. A situation somewhat of a gloomy nature, yet not perfectly dark, has been proved by extensive experience to materially contribute to the means, by creating both an inherent desire for sleep, and a perfect tranquillity of the whole system. 5. Rich, nutritious food should be regularly given at short intervals. 6. The strictest cleanliness should be observed. 7. Many farmers occasionally bleed their calves, and the effect of this proceeding is, that it checks the too rapid development of the muscular system; while at the same time it does not prevent the secretion of the proper accumulation of the quantity of fat which is thus desired.

When it is desirous that the calves should be brought up for the purposes of stock, they ought to be made to take a moderate proportion of exercise, for the purpose of properly developing their muscular systems; while they should be allowed a sufficient quantity of rich, nutritious food, which must contain gluten in sufficient amount, that the full demand for their growth may be supplied. They ought likewise, to have a good bed, formed of clean fresh straw, with a shed for their repose during night, and for shelter when it rains. Calves thus brought up, will not only fatten quicker, but they grow more rapidly; their constitutions are healthier and stronger than those fed upon coarse, inferior, or an unwholesome diet, which is absolutely unfit for not only supplying to the extent required, the natural demands of the system, but produces a development of the ani-

mal system, which in itself is imperfectly developed whilst diseases which are not only painful and troublesome to the poor animal itself, are often engendered, sometimes ending fatally; thus proving a source of pecuniary loss to its owner.

I have endeavoured, in the course of these remarks, to point out, how the sciences of anatomy, physiology, and chemistry can be rendered serviceable to that of agriculture. I have applied the principles to one of the most interesting subjects that can occupy the attention of the farmer, and endeavoured by illustrating the principles thus advocated, by quoting the experiments performed by some of our most celebrated agriculturists; and, therefore, practically demonstrating the truths which philosophy reveals—the application of truisms, if fully carried out, will enable the farmer to manage his live stock to better advantage, than has hitherto been generally effected.—*Farmer's Gazette.*

In purchasing Agricultural Implements, great care should be taken to choose from the variety of instruments those which are best adapted to the end which it is proposed they should attain, and to the soil and circumstances of the undertaking on which they are to be employed. It is very ill-judged economy to refrain from the purchase of such as are calculated to fulfil the proposed end in the best possible manner; it not unfrequently happens that the advantages arising from the employment of them are so great that their cost is repaid in course of the very first year, nay, sometimes, in the very first season.

It will hardly be believed that there can be among agriculturists men of such narrow minds, or who are so little sensible of their actual interests, as to grudge the sum which such an instrument costs, although fully sensible of all the advantages arising from the employment of it, or authors to blend and bigoted by prejudice and avarice as to defend and advocate such niggardly and futile policy. The poorest mechanic does not hesitate to purchase the tool adapted to his art as soon as he becomes convinced that it will tend to facilitate and improve his labor, and render the fruits of it more perfect. It is such contracted views as these which retard the progress and perfection of the noble science of Agriculture, and debase it below the level of the meanest art.—*Thaer's Agriculture.*

Plants are nourished by the absorption of food from the air and earth, in consequence of which they grow, and produce their peculiar secretions. The growth of plants is very rapid; the leaves often acquire six or seven times their original weight per hour. Dr. Disagulier calculates that a turnip seed weighs not more than the 14,000th, or 15,000th, part of an ounce, and that it may increase fifteen times its own weight in a minute. This root has been found to increase 15,990 the original weight per day.