

agricultural shows, of different forms, prices, &c. By means of this implement and the exercise of care and judgment in the selection and economy of material, cattle feed may be improved and increased to an extraordinary degree. It thus becomes more nutritious and fattening, and answers many other purposes connected with the management of live stock, and the judicious management of a farm.

Another most important means of economising fodder; one which every farmer can more or less adopt, consists in keeping animals clean, dry, and warm during the trying season of winter. A sufficient amount of good food and water, regularly given, although of indispensable importance, does not embrace the whole of the proper winter-management of stock. In this climate shelter and warmth are no less indispensable, if sound thrifty animals are desired.—Hence the necessity of suitable buildings to meet these conditions. It is a clearly ascertained physiological fact, which modern chemistry has established, that a large portion of the food of animals exposed to cold and draughts, is consumed in generating and sustaining the heat of their bodies, instead of being converted into fat and muscle, as would be the case in a warmer and less exposed situation. A warm stable or byre is therefore a great economiser of fodder. Animals thus cared for will thrive better on less food than will others under less favorable circumstances with a more ample supply. This fact demands the best attention of the farmer at all times, especially when, as at present, the hay crop is so far below the average.

It is important, however, to observe, particularly in reference to sheep, that buildings intended for wintering stock should not be made too close and warm; a mistake, it is true, we are not in danger of committing in this country. All our domesticated animals require a constant amount of pure air, and therefore proper attention should be paid in the construction of farm buildings to the vital question of ventilation. To combine the various conditions necessary in the healthy management of stock, requires constant care and a sound judgment. In this country sheep must be put into yards having sheds, during the cold and storms of winter. But great care is needed in seeing that they are not kept too close; they require exercise and change, with plenty of fresh air, otherwise they will decline in condition, and become the victims of some contagious disease. Of all the physical conditions in which this animal can be placed, those most unfavorable to its health and growth, are dampness and exposure to cold stormy wind. Proper attention to matters of this kind, which come more or less within the ability of every farmer to carry out, will, in seasons like the present, make a scanty supply of fodder do more service in promoting the growth and sustaining the health of the domesticated animals, than a more abundant supply without such attention.

ON THE FIRST PRINCIPLES OF AGRICULTURE.

As every trade and profession must now-a-days have its axioms, postulates, or first principles, in order to give it a scientific dress among other crafts, it is highly reasonable that the art of Agriculture, which is now almost completely reduced to a science, should also be permitted to assume its first principles. Without the knowledge of first principles, nothing can be expected from any of the practitioners of Agriculture worthy of attention—their practice being merely a copy from that already established, if not some gross deviation, perhaps, from the beaten track, by means of some erroneous idea of their own conceiving. Men acquainted with first principles will never deviate from them, while they find