

er, thresher, horse-rake, horse fork, and steam plow have come within the last twenty-five years, and the last is yet to be perfected to adapt it to general use. The grain raiser of to-day cuts and shocks ten acres of wheat with four men, while less than a century ago the four men would only cut and shock two acres. The improved implements now enable the intelligent farmer to work a two hundred acre farm as easily as fifty acres in that early time. And, when a hundred acres of grain is harvested, he may thresh at the rate of 500 to 1,000 bushels per day. But, perhaps, with all these facilities for raising crops, the price may be so low as to be unremunerative? No, the price is generally higher than in those early times. Wheat, oats, barley, rye, corn, bear a higher average price than fifty years ago. If we turn to the dairy, we find the price of butter and cheese has quite doubled in that time. The price of meat is much higher, a yoke of oxen brings double, a span of horses three times former prices. It therefore follows that a farmer may get a better living with much less labor, and yet he complains of hard times, of difficulty to make his income and expenditure correspond. But with easy getting has come much easier spending. Extravagance and show has reached even the farmer. He has caught the infection from other classes, who, if they had only their own, are less able to spend than himself. His productions are the source of nearly all profits, but, making little study of trade and commerce, he allows the lion's share to go to the non-producers.

But the farmers have been learning for the last twenty years as never before, that if they are to reap the advantages which their position as the great producers entitle them, they must study their business and its relations to all other interests as much as do manufacturers or mechanics. And, taking a lesson from other industries, they saw that an intimate knowledge of all the details, a constant effort to cheapen the cost of production, and a cooperation of the producers to control commercial value, prevailed generally. Hence, to this end come agricultural societies, dairymen's associations and patrons of husbandry. All these tend to the same end, the harmonious cooperation of farmers as a class. They saw great corporations combining to unreasonably assess their crops on the way to market, and they answered combination with combination. They saw that, if numbers and unity had power, they could offset the kings of the soil against the kings of the rail. The kings of the rail, with millions of money, succumbed to the kings of the soil with millions of votes. These lessons on the practical operation of unity of numbers has given a powerful stimu-

lus to the order of Patrons of Husbandry, and, through this organization, (which is only a well organized farmer's club), farmers are likely to make much greater progress in social and industrial education in the future than in the past. These granges, which reach every neighborhood, are to become the primary schools of the farmer. Here he discusses all the questions pertaining to his interest, and he soon learns how to ship his own products even to foreign countries. It seems likely to lead to a complete cooperation of the three millions of farmers—not all of them joining the order, but those who are in it will be the most influential and carry the rest in the current.

Farmers are thus becoming more independent and self-reliant than ever before. We think that a survey of the field will convince any one that the farmer, least of all, has reason to complain at the beginning of this Centennial Year.

SHORTHORN SALES FOR 1875.

It seems that neither panic nor depression in general business can affect the appreciation in which these cattle are held. The sales of the past year aggregate nearly twice as much as those of 1874, being \$1,832,383 to \$1,004,159. In 1874, 2,592 animals were sold at an average of \$387, while in 1875 4,347 animals were sold at an average of \$422 per head. This increase in the average price is noteworthy, when we consider the greater number sold and the greater dullness in general business. It may be considered remarkable that while high bred and thoroughbred horses have declined materially in price, thoroughbred Shorthorns have risen, not only on the best strains, but \$39 per head, on the general average, of 4,347 animals.

Perhaps the difference in the cases may be accounted for on the ground that Shorthorns, as improvers of the blood of our common cattle, are needed over a very wide territory; and, reducing the time required to grow a 1,500-pound bullock, thus bringing so much quicker returns, they have made their way faster than thoroughbred horses, which require two years more time to mature for market. In fact this is the reason given by English farmers for raising cattle rather than horses, enabling the breeder to receive his compensation one to two years sooner. We give large space to Shorthorns in this number, not because they are the greatest stock interest of the country (as one of our Western contemporaries seems to think, for it claims to be the great representative of stock breeders, and then occupies all its cattle space with Shorthorns, when the dairy interest of two counties in New York represents more capital and more income than all the

Shorthorns of the United States), but because they are the seed from which the great mass of common cattle is to be improved. We think the future of the Shorthorn will be greater than its past, and that its blood is to regenerate and improve all our beef cattle from the Atlantic to the Pacific.—*American Live Stock Journal*.

THE ALDERNEY AND GUERNSEY COW.

CHAPTER IV.—Continued.

An animal always cold is always uncomfortable, and a large proportion of the food she takes is consumed in keeping up the heat of the body, instead of making milk,—warmth is therefore, in effect, food to the Cow, and may be obtained at little cost and with little trouble by means of a shed as recommended, and where this is dry and clean, the Cow will resort to it spontaneously, whenever she knows it to be conducive to her comfort, which, as above said, is her food to a great extent. Cold and sudden chills, on the other hand, are a great detriment to the appearance of the Cow, and are frequently the cause of her falling off in her milk so early in the season.

So important is it to provide against great alternation of temperature, that the impossibility of doing this in large pasture, has within the last few years engendered the lung disease which has been so destructive among cattle. Formerly pastures were small in extent and defended by large and thick hedge-rows as well as trees, but the practice latterly having been to open the fields and to divest them of everything which could form a shelter for the cattle, what has been gained in increasing the quantity of feed, has been lost by the disease which the inclemency of an unsheltered field has engendered. It is much to be questioned, whether nature was not the best judge after all.

Much injury is likewise done by turning cattle out too early in the season—changing them from a warm yard or shed, (especially just after calving), to pass the night in the open air, before the season is sufficiently advanced to make such exposure bearable.

In proportion as the breed of cattle has improved, so has the necessity of care become apparent, delicacy of constitution and physical sensitiveness always increasing with high blood. As a principle of economy, I strongly advocate the practice, (which is lately gaining ground), of bringing milch Cows in all night, *all through the year*,—for they spoil much grass, especially in full strong pasture, during the night, and are not benefitted by being in the dewy grass too early in the morning; the manure also would be