

The Farm of the Past and the Future.

The farmer has been spoken of to-day, but I wish to speak especially of the farm.

In nature, all living beings must have nourishment to preserve life. Plants abstract their living from the soil: lower animals feed on plants and other animals; man, the culmination of earthly life, must also look to lower beings and to mother earth for his sustenance; and since the days of Adam, that sustenance has been given only as the reward of toil. At first, I presume this toil was of the simplest and rudest nature and consisted in gathering his food from whatever he could find. But he is a progressive being, full of inquisitiveness, and he soon saw that a little attention to growing nature would assist its productiveness greatly. This was

the foundation of farming.

Farming in its infancy was not different from that of any other infant industry—*man*. The first records we have of this trade tell of the women digging up the soil with crooked sticks while the men passed their time in battle and luxurious living. At that time, nothing was known of the art except to plant, till, and gather. If it were a good crop, the gods were propitious; but if the crops were a failure, the people had displeased the gods and this was sent as a punishment.

Farmwork was considered low and degrading and was followed only because it was necessary to the production of food. Very little thought was given to the improvement of the work; no machinery, no natural forces, and but very few beasts of burden were used;

it seemed, the brow of a serf was considered cheaper than the brain of a lord.

But those long days of unassisted human toil are past; people now vie with each other in trying to do the most for humanity in the way of labor saving inventions. Hard, manual labor is being succeeded to a great extent by the work of machinery. Where once the soil was scratched with wooden implements, there now run gang plows and cultivators; the same kind of grain that was harvested with a reaping hook, now falls before the binder; while the tramping-floor and flail have been succeeded by the steam thrasher. In short, invention has done much toward taking the drudgery of farmwork from the shoulders of man kind and placing it upon untiring

steel and iron. This has enabled the farmer to enlarge his fields; where once he tilled a few acres, he now has immense farms. We can easily see, now, why farm-work has been considered such drudgery; and, in fact, it was extreme drudgery to raise a crop entirely by hand labor, and then raise only enough to do through the year when blessed with good returns.

The mere fact that invention has helped to remove a great deal of this drudgery, places farming at present far in advance of that in the past. But this is not all. In older times, the ground was sown to whatever grain was the most needed, paying little attention to its adaptability. If the soil became exhausted, it was turned over to wild growth as useless. If the ground was too wet, it was left untilled;

if too dry, it lay barren. But as population increased, it became evident that the land must be better cared for; and so evident has this become, that instead of governments devoting their attention to the carrying on of war, as has been said before, to-day, they now study the upbuilding of agricultural industries, and large endowments are given for the furtherance of their progress.

With the knowledge chemists already have of soil composition and planter exhaustion, it is becoming only a matter of renewing the ground each year by changing the crops. When the growth of plants was analyzed, and it was found that those elements required as food for one plant did not suit others, it soon became evident that a change of those plants would aid in renewing the soil. Had this been known and prac-

ticed years ago, our sister states in the east need not now be paying out the income from each year's crop for commercial fertilizers that they may raise a crop the next year. Ignorance and neglect of this have carried thousands of dollars from those farmers to Lord North's interests in Chili and built up great chemical fertilizer establishments in the east. It requires only neglect of intelligent care for a few generations to place the farms of this state in the same category.

But so far, the fertility of the soil has not been of great concern to Western farmers. The land is rich enough to suit anyone. But just how to get enough moisture on the crops to keep them in a growing condition has been the question, and is still the ques-

tion for those farms situated to the west of us. This obstacle, like the others, is being removed. The farmers have agreed with the old deacon in the idea that there is no use praying for rain when there is a hot wind from the south west, and have gone to irrigating. A great many acres of land in the west have been reclaimed from the arid plains by this method. And not only is irrigation practiced to a considerable extent in this country with beneficial results, but lands are being reclaimed otherwheres. Hundreds of thousands of acres in the great Sahara Desert are becoming tillable by irrigation carried on from artesian wells; and it may soon be possible by practical chemistry and irrigation to reclaim all of earth's waste places.

Now, after we have the sail in suitable condi-

tion and the grain planted, we must have some assurance that a crop is going to be raised in which to use our machinery. In order to have this, it becomes necessary to war against the many parasites to which vegetable growth is subject. Hessian flies, Chinch bugs, and grasshoppers with innumerable smaller pests have made many destructive raids on crops; but their deeds of depredation are becoming fewer. The grasshoppers are driven into ditches and destroyed by droves; the chinch bug is inoculated and allowed to pine away and die; while the rest are taken care of by the spraying machine with fungicide and insecticide solutions.

I do not wish anyone to think that I am trying to claim farming to be a calling that requires little or no

physical labor. It is not, at all; for, although it has been raised to a much higher standard of excellence, there is still hard, manual in it; and, often times, a great deal of worry to see how, in a bad year, the taxes and interest are to be paid and a living left in what remains. But farming has been progressive; it is progressive; and we look to the future for it to be raised upon a level with other callings of life. When our knowledge of the chemistry of soil has become so perfected that we fully understand the exhaustion and supply of the soil by different plants and can use a practical rotation of crops; when irrigation has been developed enough that the crops need not suffer from want of water when Mother Nature fails to bless our Western plains with a beautiful

supply of rain; when the drudgery of farmwork is done by machinery, we shall expect life on the farm to be a pleasant one; we shall expect the farmer and his family to be able to spend a few weeks each year visiting friends and relatives abroad, as his mercantile neighbor does; we shall expect to see the drudgery and care so far leave the farmer's home that the majority of inmates of the asylum shall not be farmer's wives. Indeed, we expect to see all nature working in harmony on the farm, and farming holding its real position as a mighty and productive agent in the welfare of humanity and happiness of this world.

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