



intensified farming. The result is that in the East we have little cereal production but a great deal of truck farming and market gardening. In both cases the amount produced has been increased and the farmer has reaped larger profits. This is brought out very clearly if we study the history of agriculture in the United States.

During the early years of the nineteenth century about eighty per cent. of the male workers of the United States were employed upon the farms at that time, production was limited by the primitive methods there in vogue that people who wished to enjoy an abundance of food and the other simple comforts of life were compelled to live on the farm when they could be assured of a proper supply. The farmers were unable to produce food enough to feed a large urban population and the manufacturing industries were limited not only by a lack of food to sustain cities but by the lack of a market for factory products. For the agricultural communities, not being able to produce a surplus for sale were unable to buy manufactured products. During the past century, however, farm implements and machines have come into use which have so increased the efficiency of labor that the last census shows that about thirty-five per cent. of the male workers of the nation now produce the food of the nation and furnish an enormous surplus which is disposed of in the European and other markets.

It is often claimed that it was the improved methods of transportation and not the improved farm machinery which caused the increase in the amount of food stuffs produced. When we consider the records of history this does not appear to be the case. Railway construction in the United States began in 1828 and from that time until 1846 an average of about three hundred miles per year was built. During this period the railways did not stimulate the production of wheat for from 1800 to 1846 the export of flour from the United States amounted to an average of about a million barrels per year. At no time did it show any material increase and the exports of wheat were actually less from 1830 to 1840 than for the first decade of the century.

The reaper was first placed on the market successfully for the harvest of 1845. In 1847 the export of wheat and flour was five times as great as the yearly average for the preceding forty years. Between 1849 and 1859 the wheat crop increased seventy per cent. and in 1880, thirty-five years after the introduction of the reaper the export of wheat and flour amounted to thirty-five times the yearly average for the forty years preceding its introduction. Railway construction which had averaged only three hundred miles per year prior to the introduction of the reaper made remarkable gains in 1847 and 1849 and progressed at a rate of about two thousand miles per year between 1850-60. Thus it would seem that it was not the railways which caused

avoiding, to a very large extent, all loss from weathering, which under the old regime was often very great. The modern threshing machine makes a more complete separation of the grain from the straw, delivers a clean product and does not cause so much injury to the grain as did the old method of threshing with a flail or by driving cattle over the grain.

The character of the farmer, and his position in the social world has been greatly improved by the introduction of labor saving machinery. He has learned to farm with his head, to realize that success by mere brute force is impossible and that drudgery is merely labor without thought. Under the old reign the farmer slaved from early morning until late at night. His

farmers of other countries he naturally becomes interested in those countries and will study their climates and physical conditions, the crops which they produce and the different systems of farming in vogue there. By this he is enabled to plan his work so that he will be able to dispose of his products at a time when there will be an active demand for them, or perhaps he will find that he could make greater profits by introducing some new system of tillage or some new variety or species of grain. In this way his intellect is quickened, his knowledge is increased, his outlook is broadened, his reasoning power is developed, he rises in his own and his fellow citizen's estimation and becomes a valuable asset to his community and to the nation.

Labor saving machinery has placed the farmers of all countries in competition on the markets of Europe. The governments of these countries now realize that the true prosperity of their country depends upon its farmers being able to place the maximum amount of produce on those markets at a minimum cost, and to promote this they are setting aside large grants of money for the carrying on of scientific enquiry and research along agricultural lines. They are also establishing agricultural colleges and schools where the most up-to-date information concerning agricultural subjects is taught to the young men and women who intend to follow agriculture as their life work.

Besides raising the farmer in the social and educational scale farm machinery has made the farmer a great deal more independent. He does not now require so many laborers and that which he formerly expended in the hire of labor he can now devote to the purchase of machinery. This will not consume food neither does it sulk and throw up the job at the most inopportune moment, nor strike for higher pay. Thanks to the farm machinery, the farmer of today is a man of comparative independence and leisure and is not seriously worried over labor problems.

But the farmer is not the only one who has profited. The agricultural laborer is in a better position today than ever before.



It looks like a pose but it isn't.

greater production of farm produce, but that the greater production of these products, due to the introduction of farm machinery, provided work for the railways and made possible their rapid extension and development.

The quality of our agricultural products has been greatly improved by the use of improved farm machinery. With a modern seed drill the crop is sown in a short time and at a uniform depth, consequently it matures evenly and will be ripe before there is danger of it being damaged by frost. With a self-binder it can be quickly cut and as soon as dry it can be threshed from the stook. By using modern hay making machinery it is possible to cut, cure and stack a field of hay in one day, thus

tools were primitive, crude and clumsy and so the work was always laborious. His whole life was an unbroken succession of weary days filled with grievous toil and unrelieved by any time for thought, rest or reading. Now while comfortably seated upon his plow, binder or other farm implements he can drive his team and still have time to look about him or to think of other things besides the immediate work he has in hand. His working hours are shortened and the work is never so laborious, so when the day's work is finished he is not completely exhausted but will feel like sitting down and reading along any line in which he may be interested. As he is selling his products in the European markets in competition with the

