Agriculture.

Agriculture has been the chief and most characteristic work of the American people, that in which they have achieved the greatest results in proportion to the resources at command, that in which their economic superiority has been most strikingly manifest. In ten years from 1790, the mean population of the period being 4,500,000, 65,000 square miles were for the first time brought within the limits of settlement, crossed with roads and bridges, covered with dwellings, both public and private, much of it also cleared of primeval forest ; and this in addition to keeping up and improving the whole extent of previous settlements, and building towns and cities at a score of favoured points. In the next decade, the mean number of inhabitants being about 6,500,000, population extended itself over 98,000 square miles of absolutely new territory, —an area eight times as large as Holland. Between 1810 and 1820, besides increasing the density of population on almost every league of the older territory, besides increasing their manufacturing capital twofold, in spite of a three years’ war, the people of the United States advanced their frontier to occupy 101,000 square miles, the mean population being 8,250,000. Between 1820 and 1830 124,000 square miles were brought within the frontiers and made the seat of habita­tion and cultivation ; between 1830 and 1840, 175,000 square miles ; between 1840 and 1850, 215,000 square miles. The war of seces­sion, indeed, checked the westward flow of population, though it caused no refluence ; but between 1870 and 1880 territory embrac­ing 297,000 square miles was reclaimed from the wilderness and the desert, was divided into farms, crossed everywhere by roads and here and there by railroads, and dotted over with dwellings.

That which has allowed this great work to be done so rapidly and fortunately has been, first, the popular tenure of the soil, and, secondly, the character of the agricultural class. At no time have the cultivators of the soil north of the Potomac and Ohio consti­tuted a peasantry in the ordinary sense of that term. They have been the same kind of men, precisely out of the same homes, generally with the same early training, as those who filled the learned professions or who were engaged in manufacturing or com­mercial pursuits. Switzerland and Scotland have, in a degree, approached the United States in this particular; but there is no other considerable country where as much mental activity and alertness has been applied to the cultivation of the soil as to trade and manufactures.

But even the causes which have been adduced would have failed to produce such effects but for the exceptional inventive ingenuity of the American. The mechanical genius which has entered into manu­factures in the United States, the engineering skill which has guided the construction of the greatest works of the continent, have been far exceeded in the hurried “ improvements ” of the pioneer farm ; in the housing of women, children, and live stock and gathered crops against the storms of the first few winters ; in the rough and ready reconnaissances which determined the “lay of the land” and the capabilities of the soil; in the preparation for the thousand exigencies of primitive agriculture. It is no exaggeration to say that the chief manufacture of the United States, thus far, has been the manufacture of four million farms, comprising 540,000,000 acres.

The people of the United States, finding themselves on a con­tinent containing an almost limitless extent of land of fair average fertility, having at the start but little accumulated capital and urgent occasions for the economy of labour, have elected to regard the land in the earliest stages of occupation as practically of no value, and to regard labour as of high value. In pursuance of this view they have freely sacrificed the land, so far as was necessary, in order to save labour, systematically cropping the fields on the principle of obtaining the largest results with the least expendi­ture, limiting improvements to what was demanded for immediate uses, and caring little about returning to the soil an equivalent for the properties taken from it in the harvests of successive years. But, so far as the Northern States are concerned, the enormous profits of this alleged wasteful cultivation have in the main been applied, not to personal consumption, but to permanent improvements,—not indeed to improvements of the land, but to what were still more needed in the situation, namely, improve­ments upon the land. The first-fruits of a virgin soil have been expended in forms which have vastly enhanced the productive power of the country. The land, doubtless, as one factor of that productive power, became temporarily less efficient than it would have been under a conservative European treatment ; but the joint product of the three factors—land, labour, and capital—was for the time enormously increased. Under this regimen the fertility of the land of course in time necessarily declined, sooner or later according to the nature of the crops grown and to the degree of original strength in the soil. Resort was then had to new fields farther west. The granary of the continent moved first to western New York, thence into the Ohio valley, and then, again, to the banks of the Mississippi. The north and south line dividing the wheat product of the United States into two equal parts was in 1850 drawn along the 82d meridian. In 1860 that line was drawn along the 85th, in 1870 along the 88th, in 1880 along the 89th. Meanwhile one portion of the inhabitants of the earlier settlements joined in the movement across the face of the continent. As the grain centre passed on to the west they followed it, too restless by character and habit to find pleasure in the work of stable commun­ities. A second portion of the inhabitants became engaged in raising, upon limited areas, small crops, garden vegetables, and orchard fruits, and in producing butter, milk, poultry, and eggs, for the supply of the cities and manufacturing towns which had been built up out of the abundant profits of the primitive agricul­ture. Still another portion of the agricultural population gradually became occupied in the more careful and intense culture of the cereal crops upon the better lands, the less eligible fields being allowed to spring up in brush and wood. Deep ploughing and thorough drainage were resorted to ; fertilizers were employed to bring up and to keep up the soil ; and thus began the serious sys­tematic agriculture of the older States. Something continued to be done in wheat, but not much. New York raised 13 million bushels in 1850 ; thirty years later she raised the same amount. Pennsylvania raised 15½ million bushels in 1850 ; in 1880 she raised 19½ million bushels. More is done in Indian corn (maize), that most prolific cereal, the backbone of American agriculture; still more is done relatively in buckwheat, barley, and rye. Pennsyl­vania, though the tenth State in wheat production, stands first in rye, second in buckwheat, third in oats. New York is only thir­teenth in wheat, but first in buckwheat, second in barley, third in rye. We do not, however, reach the full significance of the situation until we account for the fourth portion of the former agricultural population, in noting how naturally and fortunately commercial and manufacturing cities spring up on the sites which have been pre­pared for them by the lavish expenditure of the enormous profits of a primitive agriculture upon permanently useful improvements of a constructive character. These towns are the gifts of agriculture.

The agricultural returns for 1880 showed a total of 4,008,907 farms, comprising 536,081,835 acres, of which 284,771,042 were improved and 251,310,793 unimproved. The improved lands were made up of 223,067,144 acres of tilled lands, including fallow or grasses in rotation, and 61,703,898 acres of permanent meadows, pastures, and orchards. The unimproved land comprises 190,255,744 acres of woodland and forest The unimproved land in farms was, in 1860, 59∙9 per cent. of the total land in farms ; in 1870, 53∙7 ; in 1880, 46∙9. It will be seen that the farms of 1880 comprise little more than one-third the total area of the country. The remainder consists of large fertile tracts, which will, in the near future, be embraced in farms ; of extensive districts, along the frontier, occupied by the grazing interest ; of water surfaces, rivers, lakes, ponds, and swamps ; of barren tracts along the shore, and of the area of innumerable rugged hills and vast mountain chains ; and, lastly and chiefly, of the great arid plains beyond the 100th meridian.

The value of farms, including farm buildings, returned in 1880 was §10,197,096,776; the value of farming implements and machinery, §406,520,055; of live stock on farms, §1,500,384,707. The live stock on farms comprised horses, 10,357,488; mules and asses, 1,812,808; working oxen, 993,841; milch cows, 12,443,120; other cattle, 22,488,550; sheep, exclusive of spring lambs, 35,192,074; swine, 47,681,700. The foregoing numbers relate only to live stock upon farms. The report of the special agent appointed in 1880 to canvass the grazing interest, outside the limits of defined farms, estimated the number of ranch and range animals as follows:—cattle, 3,750,000; sheep, 7,000,000; swine, 2,091,000.

The acreage and yield of the cereal grains reported in 1880 (crop of 1879) were as follows :—wheat, 35,430,333 acres, 459,483,137 bushels; Indian corn, 62,368,504 acres, 1,754,591,676 bushels; oats, 16,144,593 acres, 407,858,999 bushels; barley, 1,997,727 acres, 43,997,495 bushels; rye, 1,842,233 acres, 19,831,595 bushels; buckwheat, 848,389 acres, 11,817,327 bushels.

Of wheat fourteen States produced over 10,000,000 bushels each, six States over 30,000,000. The chief producing States, with their respective crops in round millions of bushels, were Illinois, 51; Indiana, 47; Ohio, 46 ; Michigan, 35; Minnesota, 34; Iowa, 31; California, 29. 303 million bushels were produced in regions having a mean annual temperature of between 45o and 50° F., 51 millions between 40o and 45o, 59 millions between 55o and 60°. The general average yield per acre was 13 bushels.

Of Indian corn twenty States produced over 20 million bushels each, six over 100 millions. The chief producing States, with their respective crops in round millions of bushels, were Illinois, 326 ; Iowa, 275 ; Missouri, 202 ; Indiana, 115 ; Ohio, 112 ; Kansas, 106. 1300 million bushels were produced in regions having a mean

annual temperature between 45° and 55o, 229 millions between 55o and 60o, 113 millions between 60o and 65o. The average yield per acre was 28 bushels.

Of oats ten States produced over 10 million bushels each ; five produced over 30 millions. The chief producing States, with their respective crops in round millions of bushels, were Illinois, 63;