

From the Transactions of the New York Agricultural Society.

ENGLISH AGRICULTURE—A GLANCE AT ITS PROGRESS AND PROSPECTS — BY JOHN HANNAH, NORTH DEIGHTON, WETHERBY, YORKSHIRE, ENGLAND.

The paramount importance of agriculture as a producer of national wealth, its capability of rendering a people independent of others for the means of life and enjoyment, have always entitled it to take the first rank in a nation's estimation. And, although it has not always secured this estimation, we shall find, if we examine carefully the records, both of sacred and profane history, that the policy which has sanctioned this neglect, has caused the ruin of the best interests of the country.

But although this truth has been open to the eyes of the world for ages, it is an extraordinary evidence of the perversity of human intelligence, that it is only within, comparatively speaking, a few years that it has been perceived, or at least acknowledged, so as to be acted upon in England. The effect, however, of this knowledge has been so magical, yet so palpably evident; the improvement and extension of agriculture, as a practice, has been so rapid, and its estimation, as a science, so great, that it would be a labour worthy of the ablest pen to trace that progress, because it is a labour that would be fully appreciated by every inquiring mind. Composed, however, as such an inquiry should be, of a history of its condition, principles, practice, and statistics, and that too, in a country where an endless variety, seasons and climate combine to make exceptions to every principle, to vary every practice, and to mystify every calculation, it would seem to be a work which, if not above the power of an individual, would require every assistance that time and talent could secure him. To attempt, then, had we the ability requisite, to give such a history, of even one branch of the subject, in a paper like the present, and that too, in the few days which circumstances, over which I have no control, (I am now writing at exactly one month from the day, yet more than four thousand miles from the place of publication), I am able to give to its consideration, would be absurd. Yet, although the comprehensive nature of this subject prevents any attempt at such a view of it, it is attended with one advantage, its high importance will give, even to this cursory "glance," which it would not otherwise possess.—That this interest will not be entirely wasted I have the presumption to hope. Information is the corner stone of interest, and few inquiring minds can be led to the view of any subject in its past and present phasis, without making some lesson for the future.

In entering upon the first part of our subject, the progress of English agriculture, the course that suggests itself to us is to divide it into those marked epochs of transition, or change, which are discoverable in the progress of every thing connected with, or influenced by human nature; and to look at the spirit pervading the practice at each period. Taking, however, a general view of the subject, we observe but one period of marked transition; a change from a state of things under which agriculture languished for hundreds of years without making any advance to one, under which, in fewer months, it has made wonderful progress and improvement. This is the great phenomena that presents itself to us in tracing the progress of English agriculture; and indeed that a science which was necessarily prac-

ticed and extended with the increase of population, should remain comparatively speaking, stationary; at least, that it should be surpassed by every other art or science, in all approaches to permanent principle; and that, after a torpid existence of more than 1,600 years, it should start at once into the vigour of youth; develop, in the course of a generation, the energies that centuries had failed to elicit, is one of no mean order. In order, therefore, to illustrate this progress, it will be necessary for us to look, first, at the practice of agriculture previous to the transition; at the influences tending to produce a change; a third, the result of these influences, as developed in the practice up to the present time.

Of the practice of agriculture in England before the Roman invasion, we find little mention made by historians. We are told by Cæsar that it had made slight progress in the counties of Somerset, Hants, and Wilts; that they grew corn, manured the land, and had abundance of cattle; while the rest of the people led a more savage life, living upon the game of the forest and the spontaneous productions of the earth.—After the conquest of Britain, a change took place. "Wherever the Roman conquers, he inhabits," says Seneca, (Consolat. ad Helviam, c. 6); and where he inhabited, history assures us he always carried the language, the manners, the arts and the vices of Rome. Africa, Spain, Gaul, and Pannonia, are, as is attested by Apuleius, Strabo, and Paternulus, evidences of the manner in which "the nations of the empire insensibly melted away into the Roman name and people." And Britain, if we may believe Tacitus, was not an exception.—Thus, he tells us that Agricola, "to wean them from their savage customs, enticed them with pleasure, and encouraged them to build temples," &c. Also, that "to establish a system of education, and to give the sons of the leading men a knowledge of letters, was a part of his policy," and that by these and other means, "they who had always disdained the Roman language, began to cultivate its beauties. The Roman apparel was seen without prejudice, and the toga became a fashionable part of dress.—By degrees the charms of vice gained admission to their hearts; baths, porticoes, and elegant banquets grew into vogue, and the new manners, which in fact seemed only to sweeten slavery, were, by the unsuspecting Britons, called the arts of polished humanity." With the other arts of Rome, it is but fair, therefore, to presume that her colonists introduced and practiced her agriculture. Indeed, it must have been both introduced and encouraged, for we have it from the Emperor Julian himself, (*Orat. ad S. P. Q. Atheniensem*, p. 250), that he at one time freighted a fleet of 600 vessels with corn exacted from the Britons. "And if," says Gibbon, (ch. 19, Decline and Fall of Roman Empire), "we compute those vessels at only 70 tons each, they were capable of exporting 120,000 quarters, and the country which could bear this must have attained an improved state of agriculture."

From these facts then, it will be evident that if we would look at the condition of English agriculture during the first five centuries, we must turn to that of Rome.—Indeed, our reason tells us that, practiced by Romans themselves for more than 400 years, it must have approximated to that of the mother country, almost as much as climate and other differences between the two countries would allow. But although we have no records illustrative of the subject, it is impossible for the fact to be otherwise; for at the period when Rome sent her colonists to Britain, agriculture was, and conti-

nued for ages afterwards, to be the most honourable and esteemed of all professions. Her highest characters, amongst whom it will suffice to mention Cincinnatus and Curius Dentatus, employed themselves in the pursuit; and Cato himself tells us that "when they would praise a deserving man, he was called a farmer and a good husband-man." But not only had it attained this estimation as a profession, but had made no mean advance as a practice. Industry and observation had removed the errors of ancient custom, and Cato, Varro, Cicero, Virgil, Columella, and Pliny had employed their pens in promulgating its principles. Thus, we are told that they cultivated wheat, barley, oats, beans, peas, flax, lupines, kidney-beans, tares, turnips, &c.; also, the vines, olives, &c. Gibbon too, tells (Decline and Fall, c. 2), that "the use of artificial grasses became familiar to the farmers both of Italy and the provinces; and that the assured supply of wholesome and plentiful food for the cattle during the winter, multiplied the number of flocks and herds, which, in their turn, contributed to the fertility of the soil." Thus, in fact, they had partly approximated to that system which has enabled the farmer of the present day, by alternate white and green crops, to double the value of his produce and to increase the fertility of his soil.

Of manures, they used those animal and vegetable ones which are at the present day employed. Lime, marl, and various composts were in use. Of the value, too, of liquid manure, and of the injury done to the dung-heap by being too long exposed to the action of the atmosphere, they were conscious, and dug pits in which to store it, in order to prevent the double waste. In this, they made a slight approach to the Flemings of the present age, whose careful management of their farm-yard manure, and the liquid from it, is worthy of our imitation.—A still further knowledge of the value of manure is displayed by the Romans in their burning the stubble, collecting ashes, and even sowing green crops for the purpose of ploughing in. (Varro. l. c. 3).

They also used top-dressings of hot manures, such as pigeons' dung powdered, which was put in with the hoe. In the practical operations of agriculture, when we take into account the simple mechanism they employed, they were by no means contemptible. Thus, Pliny tells us that they were particularly careful in ploughing, endeavouring to have perfectly straight and even furrows. They ploughed the land three times over, always before sowing; sometimes taking a furrow nine inches deep, and sometimes only three. On heavy soil, nine ploughings were frequently given. They made a fallow every other year. Indeed it would appear that the advantage arising to vegetation, from the soil being well pulverized, was well known; for Cato being asked, "What is good tillage?" answers, "To plough." "What is the next?" "To plough. The third to manure. The remainder is to sow plentifully, to choose the seed carefully, and to eradicate as many weeds as possible."

For this purpose, the hoe was used liberally. Crops, when too luxuriant were, as now, depastured for a time. The seed was sown in the ridge, as well as broadcast furrow, a practice now termed "ribbing," and which, with an efficient system of ploughing, if not superior, is equal to the drill system.

Among the permanent improvements, draining was esteemed and practiced in some degree, if we may judge by the mention made by the Latin writers, of the good effects derived from it, and by the particular directions given as to their construction,