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

(Continued from our last).

To trace the progress of the practice of agriculture since the period when it was beginning to be considered a branch of natural science, and capable of elucidation by the application of the true rules of philosophy, is not our aim. From the first birth of this principle, as we have already shown, it was some time before it became visible upon the practice. Although in the Elizabethan age, the profession became more fashionable, though Fitzherbert, Tusser, and Platt, the three first writers on the subject, collected the well tried axioms of the ancients, and urged many practices which had been neglected; their works show us what an educated amateur considered ought to be done, rather than what was done in the 16th century; and it was not until the middle of the 17th, that in the writings of Bligh and Weston we see the actual operation of the spirit of change. By the former, (in 1652), we have recommended the cultivation of clover. And by the latter, (1684) the turnip as the winter fodder,—the use of which crops have completely revolutionized the state of agriculture. But it was not till the next century that they came fairly into use; from which time the present practice may be said to date its existence: nor till some time after this, that the triumph of the modern spirit of improvement became fully developed. The bold views of Tull, (1740), gave at once the finish to the new system of cropping, (which arose from the growth of clover and turnips), and a lasting impulse to the principle which had produced the change. In the practical labours of Bakewell, and the Messrs. Culley, and the endeavours of such men as Lord Kames, "to improve agriculture by subjecting it to the test of rational principles," we see the continued influence of the new born spirit of progress, and in the present position of English agriculture, the results of that operation. The nature of this position will be seen in its elevated standing and high estimation as a science, which have secured to it within the last 15 years, the labours of such men as Davy, Sinclair, Dabney, Henslowe, Johnston, Loudon, Lowe, Stephens, Johnson, and Madden, the aid of professors at our universities, and the united efforts of more than three hundred societies, established for the purpose of elucidating truth, discerning error, and promulgating the latest improvement in the theory or the practice of agriculture—societies, too, patronized by all that have a name or standing in the country. Thus the Royal Society of England, though but of three years standing, possesses not merely the suzerainty or passive patronage of royalty, but the active support of that illustrious individual, who, it is reported, is soon to assume the dignity of King Consort,* and of more than five thousand other members.

Its position as a practice exhibits an equal advance. The first and chief evidence of

* This is the report since the Prince of Wales' birth. It is to prevent a confusion of names and the unpleasant circumstance of the son taking precedence of the father. Prince Albert is now a Governor of the Royal Agricultural Society, and has taken into his own hands a farm at Windsor. He was also elected on the 12th of this month, (Dec'r. 1841), a member of the Smithfield Club.

this which we shall notice, is seen in the change from the old infield and outfield system, and the alternate crop and fallow, or two crops and a fallow, to the present system of drill husbandry, and the rotation of barley, clover, wheat, and fallow upon stiff land; and of barley, clover, wheat, and turnips upon light and dry soils. The first advantage arising from this change on strong land, is the gain of a crop instead of a fallow, and as this crop is one of fodder or pasturage, the consequent ability to supply the market with a greater weight of stock; the second is an increase of fertility in the soil, from the increased quantity of manure made upon the farm; the third is a better chance of the wheat crop from its natural liking to fallow clover; and the fourth an increase of fertility in every crop from the drill system, and from the facility with which weeds may be extirpated, half a fallow made, and the soil at the roots of the plant stirred—a practice which theory and experience prove to be highly beneficial to vegetation.

But this is not all; by the introduction of the mangel wurtzel, the carrot, &c., into cultivation, the farmer is at times able to do without a fallow in the rotation. By judicious and effectual drainage, subsoil ploughing, many farmers can grow turnips on this stiff land; and it is yet a *questio vexata*, whether or not the fallow may not be entirely dispensed with. This is certain, however, that many of the best practical men of the day think it possible, and many upon a few fields which are thoroughly drained, do dispense with the fallow and produce a fair turnip crop. And I have no doubt but that either this or some other green crop will, in the course of time, extend the system, so that the fallow will become the exception and not the rule, for the old idea that the land wants rest is quite abandoned.

The effect of the turnip and clover husbandry upon the light and thin soils of England is still more marked. Without fodder, it is an old axiom, that there is no cattle; without cattle no manure; and without manure no corn. The total abolition of the fallow, and the substitution of two crops of green food, has therefore, upon the light lands, produced in a great degree, those advantages which we have enumerated as having arisen, by a partial adoption of the same system upon the heavy lands of England. Moreover the treading of sheep has a most beneficial effect: so that those soils, which formerly would scarcely return the seed, now produce as fine crops of corn as can be met with in England. The Yorkshire and Lincolnshire woods are startling evidences of the truth of this; and I can look out at the present moment upon 500 acres of thin limestone soil, which 50 years ago paid, and with difficulty, five shillings per acre rent, and which now are let at 25 shillings per acre. That the produce has increased in an equal or greater ratio than the rent, is evidenced by the prosperity of the present tenants. I know also a village a few miles from the city of York, the soil on one side of which is strong and deep, and on the other of light texture upon a limestone base. Not many years ago, several farms of the heavy land were exchanged for twice the number of acres of the high land, the latter being considered very bad. At the present time, however, this *quondam* bad land, by the turnip and seed management, and the use of bones and rape dust, is considered the crack land of the district, and is letting at £2 and £2 10s. per acre, while the heavy soils on the other side of the village are not worth more than fifteen shillings per acre, as they are not drained, and cannot be managed upon the improved system.

But there are several other rotations of cropping used in particular localities; but as they, for the most part, depend upon the same principle as the one we have noticed, they are but exceptions to the general rule, and space will not allow us to particularize them.

The next evidence of the improved practice of the present time is seen in the variety of crops. Wheat is no longer a partial crop—one produced in the garden soils of England—but is the farmer's paying crop. Countless varieties of seed are to be found adapted to almost every variety of soil and climate. In barley, oats, beans, peas, tares, rye, potatoes, turnips, carrots, parsnips, mangel wurtzel, hops, lin, and the artificial grasses, the same endless varieties are used, each variety being selected for some peculiar quality. In this small township, last year, I counted no less than fifteen varieties of turnips. Six sorts I myself introduced from the splendid stock of Mr. Matson, of Wingham, Kent. None of the sorts had been grown here before, and they have answered so well in what is called a bad year, that I have no doubt but that in a year or two they will be extensively used in this part of the country, to the equal benefit of the purchaser and the producer of the seed. Now, in every article of produce the same improvement is yearly progressing, because farmers are no longer averse to rational experiments, and not so much prejudiced in favour of old plans. It is, consequently, worth the while of such men as Mr. Matson, Mr. Skirving, (of Liverpool), *cum multis aliis*, to devote their time, talents, and capital in raising the best and most pure varieties of seed.

In manures we have manifest the results of the same spirit. Along with a greater skill in the economy of the manure heap, an increasing use and saving of the liquid from the cattle yard, and a more judicious application of the various composts which have been employed for ages, we have now in use a variety of hand tillages which are of modern date, at least as far as regards their general use, amongst which we may mention bones, rape dust, nitrate of potash, nitrate of soda, gypsum, urate, common salt, soot, Lauce's carbon, Lauce's humus, Clark's dessicated compost, Poittevin's disinfected manure, Alexander's Chinese manure, rags, graves, soap-ashes, &c., &c.

Of the change in agricultural implements, it is unnecessary to say that it has been wonderful. The transition from the state of things under which the hammer and the axe were the alpha and the omega of the farmer's stock of implements, (when it was a *sine qua non* amongst the ploughman's qualifications to be able to make his own plough), is evident to all. If, however, we look at the advance in the mechanism of implements within the last few years, and take into account the short time in which the several changes have taken place, we shall at once allow the part to be more astonishing than the whole; that the improvements made in the last dozen years are far more marked than all that were made previously. The fact is, that the exhibitions and rewards of our agricultural societies, have given an impetus to the spirit of experimental research in the bosom of the mechanic, and the result is an advance in knowledge equal to that made in any other branch of the practice of agriculture, by the adoption and agency of the same spirit. A practical commentary upon these remarks, is afforded by the fact, that one maker, (Ransome, Ipswich), exhibited no less than thirty-six varieties of ploughs, at the last meeting of the Royal Agricultural Society of England.