

the further it is removed from the abstract methods of speculative science, the greater will be the benefits derived from it. (1) There is nothing positive or defined in the art of cultivating the soil: the various changes of climate and locality govern everything connected with it; the inconstancy of the elements, and the more or less mysterious caprices of nature, must all be reckoned with.

Experiments, then, must form the very basis of agricultural knowledge. All the progress heretofore accomplished is the fruit of experience, and if we wish to convince the farmer of the value of a new process or of the utility of any suggested improvement, we must refer him to the logic of facts and to the results obtained from them.

It is clear that the different discoveries in the art of agriculture are due to observation.

Before man learned the art of cultivating the soil, his life was that of a shepherd or grazer. The almost universal worship of the bovine race in the antique world shows that dairying is coeval with the creation.

Among the plants gathered for the food of their flocks and herds, the shepherds remarked some, the seeds of which, when scattered about round their cots, germinated and bore fruit. Hence, the first ray of light thrown upon the fact of reproduction from seed, followed quickly by the discovery of the nutritive value of cereals. Observing that the spots where their herds had rested were improved in fertility, they learned the value of manure. And so of the necessity of allowing land to lie fallow, as well as of the advantage of a rotation of crops; both of which were indicated from very early times by the evident poverty of land subjected to too frequent cropping.

Experimental agriculture, as long as it was left entirely in the hands of private persons, could only produce slow and partial results. More than one experimenter has been ruined by his love of progress, and statesmen have at last come to feel that it is the duty of the public authorities to bear the weight of this kind of investigation, so important is it to the nation. Now, in every country where agriculture is valued and held in honour, we see the creation of establishments devoted exclusively to the making of trials and experiments for the common good of the agricultural classes.

(To be continued.)

OUR ENGRAVINGS.

Dexter-Kerry Bull.—Of this animal, *Fascination* by name, the Mark Lane Express says: He is a model of his kind; a miniature Shorthorn in everything except colour. He is docile, and has every indication of propagating rich milking stock.

I never saw but one D. Kerry bull, and that was at Rougemont: he was *not* docile, but as wicked looking a devil as ever I saw with horns on.

Revolving plough.—I have rather a fancy for all new implements provided they are simple in construction and do not pretend to do half a dozen different things at once. Judging from the engraving, Clark's Cutaway Revolving Plough ought to break up the furrow for subsequent operations in grand style. But why call it a *plough*? *Cultivator* would be the proper name, but the American farmer is so anxious to run over a great deal of land at a very trifling expenditure of labour that the term *plough* applied to this implement will induce many to buy it imagining that outting up an inch or two of a stubble with it is all the cultivation required for the succeeding crop.

What says Mr. Wood Davis, a noted contributor to the Country Gentleman?

"In the other processes of wheat-growing, especially in

(1) Very good indeed!

A. R. J. F.

the West and in California, the saving of labour is very great, the land being ploughed with gangs of two, three, and four ploughs, turning furrows of from 24 to 42 inches."

The same gentleman expects, when two new implements he mentions are perfected—not later than 1893,—“to be able to prepare land, plant and cultivate corn, at an expenditure of $\frac{3}{10}$ of a day's work for each acre grown.

Can we wonder that the average wheat crop of the United States is so small, (11 bushels an acre) if this is the style of cultivation practised there?

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An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES.

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