

ter's wear. Within the past two years some attention has been paid to the production of fine wool; and contrary to the expectations of many, American Merino sheep are as hardy as any of the races in the possession of our farmers. A good quality of Merino wool is worth, for domestic use, about 1s. 9d. per lb., and half-bred do. 1s. 3d. The Leicester, and other long combing wools, will not bring, in cash, more than 9d. per lb., and even that is more than can be paid for it for exportation to the United States and England. A good flock of Leicesters will average each about 5 lbs. of wool, and not more than 3½ lbs. per fleece may be safely reckoned from a flock of the improved merinos. Three merino sheep may be kept throughout the year on the same food that would be consumed by two Leicesters. The mutton of the latter is worth more in the market and the quality is better than that of the Merinos. In a national point of view fine wool is the most profitable to produce, and since the great bulk of the people will wear fine coats, it is important both in a national and individual sense, that they should be the growth and manufacture of our own country.

From the Journal of Agriculture.

VEGETABLE FOOD.

VALUE OF THE INORGANIC INGREDIENTS OF VEGETABLE FOOD, AND PARTICULARLY OF THE PHOSPHATES.

To read the following would, one would think, be sufficient, if anything were needed, to show the practicable applicability of science to Agriculture, and the criminal supineness of agricultural communities in not providing for a stronger infusion of agricultural knowledge in the courses of instruction adopted in our country schools for the rising generation of American agriculturists.

How sincerely do we lament that the writer, and the few others our country can boast of like him, accomplished and capable, to exemplify the connection between science and field practice, have so little leisure to favor us in this way. It is, however, a mat-

ter for congratulation that the barriers which have separated theory from practice in the art of cultivation, are every day giving way, and the time fast coming when the practical farmer will solicit the good offices of the animal and vegetable chemist, inviting him to walk with him to his stercorary and his fields, as the surest means of securing for his vocation both respect and profit.

To the Editor of the Farmers' Library.

MY DEAR SIR,—In page 6 of Mr. E. N. Horsford's Essay on the Nitrogenous Ingredients of Vegetable Food, is the following passage:—

"The various forms of food derived from grains, herbage, and roots, furnish—

- 1st. Bodies containing nitrogen;
- 2nd. Bodies destitute of nitrogen;
- 3rd. Inorganic salts—

All of which are serviceable in the animal economy. The nitrogenous bodies, from their solution in the blood, form the tissues, the actual organism. The bodies wanting nitrogen contribute, by their more or less perfect combustion, to the warmth of the animal body; and the salts of the alkalies and alkaline earths (the inorganic salts) serve to build up the osseous framework, besides constituting an essential part of every organ of the animal system. Their values for the latter purpose are in proportion to the phosphates their ashes contain."

Hence will be seen the value of the inorganic ingredients of vegetable food, and particularly of the phosphates.

Mr. Horsford also states that the difference of the nitrogenous ingredients in different analyses of the same kind of grain probably arises from a difference in the soils in which the samples analyzed were grown. That the differences in the inorganic ingredients of the same kind of grain, shown by the various analyses of the best chemists arise from the same cause cannot be doubted, and notoriously in the phosphates; for we find that when a soil is exhausted of this valuable ingredient, all the nitrogenous manure in the world, without phosphates, will not produce the cereal grains.

I will add, that in feeding young animals whose bones and muscles have yet to grow and enlarge, the importance of a liberal supply of phosphates in their food is too evident to admit of a doubt.

The phosphates, then, being clearly next in nutritive value to the nitrogen, it becomes a subject of the highest interest for the agriculturist to discover by what means, or if at