

ALARMING DETERIORATION OF THE SOIL.

THE constant deterioration of the soils in New England, and throughout most of the agricultural districts of the United States, is a fact of portentous and alarming significance, though it has not yet arrested very extensively the notice of the public. Probably there is no one fact in our agricultural economy of more pregnant interest than this, in its bearings upon our future prosperity. Some statistics, illustrating this downward tendency in our ability to produce the fruits of the earth will now be given, and they will, I think, conclusively prove that a more prudent, skillful, and scientific mode of cultivating the soil is absolutely indispensable.

Between 1840 and 1850 three hundred thousand acres of land were added to those previously under improvement in Massachusetts. Ninety thousand acres were added to our mowing lands, and yet there was a relative depreciation of the hay crop during that decade of years of twelve per cent. Our tillage lands, during the same term were increased forty thousand acres, and yet there was an absolute depreciation in our grain crop of six thousand bushels. The pasturage lands were increased more than one hundred thousand acres, with scarcely any increase of neat cattle, and a reduction of one hundred and sixty thousand sheep, and seventeen thousand swine.

The same law of deterioration is also observable in the richer regions of the South and West—showing, that, with our present unskillful modes of farming, we are taking much more from the productive ability of our soils than we are returning to them, and that our agricultural prosperity is really and constantly on the wane. This downward tendency is partially hidden from public observation by the vast products which are raised upon the new and almost limitless regions which are every year put under cultivation at the West; but the fact itself is still indubitable.

In the State of New York, between the years 1845 and 1850, 671,692 acres were added to those previously under improvement, and of course there ought to have been at least a corresponding increase in the agricultural products of the State. But what was the fact?

The number of horses decreased is 58,141.
 Milch cows decreased, 63,066.
 Other cattle the decrease was 127,525.
 Sheep, the decrease was 2,990,622.
 Swine, the decrease was 556,002.
 Of potatoes, the decrease was 7,255,066 bushels.
 Of peas and beans, there was a decrease of 1,132,054 bushels.
 Flax, the decrease was 1,956,485 pounds.
 Wool, the decrease was 3,793,527 pounds.
 Wheat, the decrease was 270,724 bushels.
 Buckwheat, the decrease was 450,724 bushels.

There was an *increase* in the amount of corn, rye, oats, barley, hay, butter and cheese raised in that State, but no greater than would have been expected from the increase of the population, which was 494,323 during those five years.

In Tennessee, the number of cattle raised was:

In 1840	822,861 head.
In 1850	750,365 "
Showing a decrease of..... 72086,	

In Kentucky, more than nine tenths of the entire area of the State are covered with farms. The number of neat cattle raised was:

In 1840	789,093 head.
In 1850	733,312 "
Showing a decrease of..... 15,781	

Horses and mules raised in Kentucky:

In 1840	395,953 head.
In 1850	381,291 "
Decrease,..... 14,562	

It is estimated by intelligent farmers in Indiana that their river bottoms, which used to produce an average crop of sixty bushels of corn to the acre now produce only forty. In Wisconsin, which is younger still, it is estimated that only one-half the number of bushels of wheat are now raised on the acre which were raised twelve years ago.

These estimates are based on the returns made to the Patent Office, and are as reliable as any now before the public. What, then, is the conclusion of the whole matter? It is this, that the soils of New England, after all the admonitions we have received upon the subject, are annually growing poorer, and that even the virgin lands of the Great West are rapidly becoming exhausted of their fertility. Other and better modes of cultivation must therefore be introduced and practiced, or our country—now the granary of the world—may at no very distant day become dependent on other lands for its daily bread. Within fifty years our population will undoubtedly reach the enormous number of one hundred millions; but the grave question is how are these myriads to be fed and clothed and educated, if our present impoverishing agricultural processes are to be continued? We have territory enough, and it is naturally rich enough to support a population of *one thousand* millions—a number to which we may yet attain—but how can they be sustained, unless some method is devised to keep up the productive capabilities of our country, and to return to our liberally discounting soils as much at least as we abstract from them? This is a problem, which many thoughtful and far-seeing men are beginning to ponder, and which requires but little wisdom to solve.—*N. E. Farmer.*

GEOLOGY AS CONNECTED WITH AGRICULTURE

THE State of New York furnishes examples of all kinds of soils; those produced from every variety of formation, and of almost every shade of intermixture. The lower counties on the Hudson River, and the territory between Lake Champlain and the Black River, now mostly a wilderness, are examples of primitive formations to a great extent. The soil of the river counties, although formed in a great measure of granite, gravel, and sand, has been so incorporated with the drift from the transition series, that the mixture makes one of the most fertile soils, when properly manured and cultivated.

The condition of our primitive districts proves in a great degree the correctness of these opinions. The agricultural settlements bordering on the great granitic formation north of Montgomery and Sara-