

THE PROGRESS OF SINKING AND LOSS IN THE EMBANKED MARSH OF SHIRLEY.

To the Editor of the Farmers' Register.

Shirley, April 6th, 1837.

I have long intended to communicate the result of the reclaimed swamp land at Shirley, an account of which I have already given up to the end of the year 1832; and although now rather out of date, I feel somewhat bound to do so, to warn others who might wish to undertake a similar work; particularly, as up to the end of the year 1832, the time last reported, the experiment appeared a successful one. I will now continue the history of the reclaimed land, and by way of making it more intelligible, I will recapitulate in a concise form, the matter reported in the third number of vol. 1st of the Farmers' Register, [page 129 to 131,) to which I refer your readers.

In the year 1825, I had 85 acres of swamp land reclaimed at Shirley, by throwing up a dike around it of one thousand seven hundred yards in length, at the cost of one dollar and twenty-five cents per running yard. Including trunks to let off; and exclude the tide water, the whole cost of diking was \$2,200. The products were as follows:

Years.	Bbbs. of Corn.	Sales.	Price per barrel.	
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In the year 1833, the crop of corn made 450 barrels, and sold at 43 12 ½ , amounted to	\$1,406
Previous balance,	5,600
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Total cleared,	7,006t

After making the crop of 1833, I found that the reclaimed land had sunk so low, and the repairs to the dike every winter were so laborious, that I had, with very great reluctance, to abandon the greater part of the reclaimed land; but as it had been a hobby with me for so long a time, I determined to try to save a

portion of the land, by running a new dike, and cutting off 20 acres of the highest part of the field nearest to the high land. With my own hands, in the winters of 1833, '34, and 1834, '35, I made a dike of 800 yards in length, 400 yards each winter, reclaiming, as I thought, permanently, the twenty acres nearest the high land. But the crops made on the twenty acres since, prove that I took in too much low land, and I have, this past winter, been obliged to run a new dike, cutting off ten acres of the highest and driest part of the swamp land, and I think, I may now say, that the ten acres are permanently reclaimed, as it is nearly as high as some of the adjoining low ground, which has been cultivated for hundreds of years, and the foundation is precisely similar.

Thus it will be seen that I have only ten acres out of the eighty-five, left; just what you predicted, when I first reclaimed the swamp. I do not regret it, now it is done and over, as it has paid very well for itself, and it was an experiment, which sooner or later, I should have made, for I

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It will be seen that Mr. Carter, in this statement, does not estimate the cost of his own farm labor in cultivating the land, nor in repairing the old, and constructing new dikes. No such estimate could possibly have been made, approaching correctness, But still there is no doubt of his being correct in the opinion, that the whole operation left him a considerable clear gain. But such gain was owing to his excellent management—and we doubt whether any thing but loss has been found in any like work, on similar ground.—Ed.

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could not have withstood the temptation of reclaiming so fine a piece of land, apparently.

This work has taught me this much, which I now communicate to the benefit of others, that it will not do to reclaim, by diking alone, swamp land which has no foundation, and so little rise and fill in the tide as we have on James River, that being only three feet. (By no foundation I mean swamp land formed of perhaps nine-tenths vegetable matter, and the remainder alluvial matter, brought down by the river many years back, which alluvial matter, is little else but the lightest clay or earth, which takes some time to deposit from the water.) The swamps above me, which have been reclaimed, at Woodson's Verina, and other places above, have a much better foundation than mine, and may be permanent: because, on a good foundation, there is no danger of the land sinking, but those so far from the falls of the river as mine, are formed of the lighter particle or portions of the alluvial deposit, and can never have much foundation, or solidity.\* The heavier portions, such as sand, clay and rich mater from the mountains, are deposited first, and by the time the freshets reach us, it has little else to deposit but light chaffy clay or earth, which produces a vegetable matter in our swamps, principally fibrous roots, and makes soil black, springy, and chaffy, which when exposed to dry, as it is when reclaimed, evaporates, or rots away, to little or nothing; and therefor, must sink in a few years or so low, as to prevent you from drawing off the water, without the use of pumps, which I once thought of trying, but found it would be too expensive. In addition to which, the dike, which is necessarily made of vegetable swamp mud, rots and evaporates so much, that it sinks faster than you can afford to raise, or repair it; for you soon dig away all the ground near it keeping up the dike.

Where the alluvial deposit is formed on clay, sand, or any solid foundation, it is not only worth reclaiming, but must be very valuable land; and that should be the first thing ascertained, in reclaiming swamp land, otherwise it will be like Dr. Franklin's whistle.

I have now got ten acres clear, and a marsh, instead of a swamp, which marsh affords sorees and wild ducks, instead of the wood the swamp formerly yielded. But I am determined to have the wood back again, and I have this spring set several hundred ash trees, and shall continue to set out every spring, until I cover the whole marsh with trees, and be able to say "Richard is himself again." t

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my? Viscount Vilain earnestly recommends the establishment of similar workshops throughout the whole country. Were he able to effect his benevolent object, he would obtain one of the most important and most beneficial results ever effected in a civilized nation; and Belgium would present the phenomenon of a whole population purged, as it were, of idleness and pauperism. Whilst upon the subject, it may be observed, according to official statistical documents, published by order of the minister of the interior, that the total gross amount of the revenue of hospitals, charitable establishments, and of the divers sums expended upon the poor, amounted, in 1833, to 11,647,000 francs, or about 285 francs per individual. The number of the poor in the provincial workhouses has been reduced from 3454 in 1827, to 2662 in 1833, a remarkable diminution, seeing that the population has increased in an inverse ratio, having augmented from 3,800,000 in 1827, to 4,061,000 in 1833. The same document states, that the total number of persons receiving instruction at the various colleges, schools, and places of education of all denominations, amounted altogether to 353,342 in 1826, whereas in 1833 the number of children attending the 5229 primary schools alone exceeded 370,000. If the progress of education had been great, the diminution of immortality is not less striking, for one finds the number of foundlings (*enfants trouvés*) to have amounted to 11,023 in 1823, whilst in 1833 they did not exceed 7997. This is not a place to develop subjects of this kind, but the above examples will suffice to show, that Belgium is making considerable progress in those branches of administration and general morality which are the most essential to the well-being of a nation. It must not be omitted to state, that the tables in question give the population to the 1st of January 1835 at 4,165,953 souls; the superficies of the soil at 3,420,570 hectares (each 2½ acres,) of which 381,470 hectares, or about one-tenth, are uncultivated, not including more than 100,000 hectares, or 1-34th, of roads and canals. In France, the cultivated land, out of a superficies of 52,570,000 hectares, amounts to 9,000,000, or one-sixth; and the roads, canals, streets, &c. to 1,216,746, or one-fifth; both of which show a remarkable balance in favor of Belgium.

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Vol. V—6

GENERAL REMARKS ON THE CAUSES OF, AND MEANS OF PREVENTING THE FORMATION OF MALARIA, AND THE AUTUMNAL DISEASES WHICH ARE THE EFFECTS OF IT, IN VIRGINIA.

From the commencement of the Farmers' Register, and at various times throughout its course, we have labored to impress on our readers the truth of several novel opinions, which have an important bearing on the healthiness as well as improvement of lower and middle Virginia, and thence, on the general prosperity of the country, and all its inhabitants. These opinions are—

1. That calcareous manures applied to soils deficient in that necessary ingredient, by combining with and fixing the otherwise wasting vegetable matters, serve to prevent malaria, the product of their decomposition and waste—and thereby either greatly lessen, or totally prevent, the autumnal diseases, which are the effects of malaria, and which are so general, and so distressing, in many parts of lower and middle Virginia.

2. That our tide-water marshes and swamps, from the very nature of their composition—the vegetable and putrescent ingredients of the soil—when embanked and laid dry, will rapidly rot away, until their level is reduced so low, that wetness will stop decomposition, at the same time that it destroys all the agricultural value of the land.

3. That mill-ponds on all but rapid rivers and other large and constant streams, are enormous evils, throughout the whole country east of the mountains, in producing disease, still more than by covering much land of great value for cultivation, if laid dry; and that the general substitution of canals for half stagnant ponds, and the total destruction of all such ponds, would produce private and public benefits of incalculable value.

It is not now designed to repeat arguments in support of the truths of either of these propositions—but merely to announce them, and to remark generally on some deductions from them, which will not need proof to any readers who admit the propositions from which the deductions proceed.

Heretofore, apparently, we have had but little success in making converts to these opinions; and therefore it is so much the more gratifying to receive the strong evidences of their truth presented on two of these subjects, in the first article in this number, on the new mill canals in Charlotte, and the report of Hill Carter, Esq., of the fate of his embanked marsh.

This improvement was conducted throughout with so much judgment, (save the grand error of attempting such a work at all,) and with so much industry and economy, that the result affords undeniable proof of the destructible nature and transient value of all such soils. We will quote our remarks and predictions in regard to this work made years ago, while the land yet bore heavy and profitable crops—and will add that such predictions had been made verbally to Mr. Carter, even before he had commenced his embankment.

"The diked tide swamp of Shirley is so beautiful a