



The Field.

Trout-Farming.

Trouting and farming are generally supposed by steady going, industrious people, to be incompatible with one another. To such, the compound word at the head of this article will read strangely. Nevertheless, it stands for an industry, which, though of but recent history, has already made considerable progress, and bids fair, when better understood, and more generally engaged in, to play an important part in providing a valuable portion of the world's food supply.

"Fish, flesh and fowl," are the three classes into which we divide the animal food consumed by man. For ages it has been the practice to make the production of "flesh and fowl" a department of human industry. Stock farming has received a great impetus of late years, both on account of the demand for meat, and the vast improvement resulting to land from a liberal supply of the manure made by animal droppings. Until recently, however, nothing worth speaking of has been done with a view of meeting the demand for fish by means of fish farming. Mankind have depended on chance supplies, and natural propagation. This course, except as it respects the ocean and great fresh water lakes, has proved insufficient. All over the world it is found that streams are speedily "fished out," unless they are preserved for private use, or from time to time restocked with young fish.

The discovery, a few years since, that spawn and milt could be taken from full-grown fish, and hatched in boxes, with a very small per centage of loss, and that the young fry could be fed and fattened like chicken, calves or pigs, has led to the introduction of a new line of business, and much has been done, both in the old world and the new, in the way of restocking streams from artificial fish hatching establishments. It has been found that the impregnated eggs, and even the small fry, can be sent long distances, thus enabling those who embark in the business to obtain profit from three sources—eggs, fry and dead fish. The Governments of England, France, the United States, and this country, have done, and are doing, something to encourage this important interest, with a view of increasing the food supply. Our government, so far, has limited its operations to the single fish-hatching establishment at Newcastle, Ont., superintended by Mr. Samuel Wilmot, who deserves great praise for the persevering manner in which he has toiled in promotion of this new and important industry. His experiments have proved that all our streams communicating with the sea can be restocked with salmon. At an early day, the Humber, Credit, and other streams flowing into Lake Ontario, abounded in this noble fish. Now we have to go to the Saguenay, Lower St. Lawrence, and

Maritime Provinces, for the sport of salmon-fishing, and a supply of this delicacy as an article of food. The restoration of the salmon to his old haunts is an object of public benefit, well deserving the attention of Government. In like manner, all our small inland lakes can be restocked with the different varieties of bass, and our larger ones replenished with salmon-trout and whitefish. By the proper steps being taken, the waters of our country may be made as productive and remunerative as its fields.

But, as we set out to call attention specially to "trout farming," we must return to our text. We advert more particularly to this, because there are so many of our readers who are in a position to do something in that line. They have streams running through their farms that were once full of trout. Now they are empty. Not a speckled beauty is to be seen in waters once all alive with them. They were fished remorselessly, no means were taken to keep up the finny supply, and now it is exhausted. In small creeks, fish spawn is exposed to so many enemies that only a small per centage of it hatches, and a still smaller per centage comes to maturity. Hence the necessity for some artificial means being resorted to. Wherever there is a trout stream this can readily be done. Ponds can easily be formed, hatching and feeding places made, and not only a supply of fish secured for family use, itself no mean item in home comfort, but a surplus raised for the market. It is thought, by those competent to judge, that if a farmer wishes to raise trout only on a small scale, it will pay him better to purchase the young fry. These cost \$20 a thousand. The processes of hatching eggs and rearing the young fish are somewhat delicate, but not more so than those of cheese-making, and other operations on the farm. With a pair or two of mature trout, and a few inexpensive facilities for the business, any person of ordinary intelligence and perseverance can succeed.

We earnestly advise all who think of trout-farming to obtain full information on the subject before they begin. Rushing into lines of business about which little or nothing is known, is a fruitful source of disappointment and loss. It is thus in dairying, bee-keeping, and other rural economies. There are several treatises on trout-farming, which contain ample practical directions. Of these we may name: "Domesticated Trout," published by J. R. Osgood & Co., Boston, Mass.; "Practical Trout Culture," published by Orange Judd & Co., New York; "American Fish-Culture," published by Porter & Coates, Philadelphia; and "Trout-Culture," published by Seth Green and A. S. Collins, Caledonia, N. Y.

There are a considerable number of establishments in the United States which make a business of raising and selling fish stock. The Pequonnock Fish Co., W. Clift, Mystic Bridge, Connecticut, secretary, advertise not only to supply spawn and young fry, but to lay out ponds, and give practical directions to parties desirous of going into the business. The fish-

ponds of Green and Collins, Caledonia, N. Y., are also quite famous. The U. S. Agricultural Report for 1872, states that some eight years ago Mr. Green's was the only establishment of this kind in the United States. Now there are about a dozen widely-known fish-farms, and some hundreds of smaller ones which have attained only a local reputation. Of these, Pennsylvania has the most in number, though not the largest. Massachusetts is probably next, while New York boasts the largest and most complete. The Western States have gone into trout-culture with great energy. Ponds for this purpose are now to be found in Ohio, Wisconsin, Michigan, Illinois, Indiana, Kentucky, Tennessee, Minnesota, and California. It would seem that the business must be found successful and profitable, from the manner in which it is extending. Seth Green says of it, "The business has paid us, and paid us better than any land-farming we ever heard of in this section of country, and if it has paid us, there is no law in this land forbidding one man to do as well as another."

To show what can be done on a very small scale, Mr. Green relates the following incident:—"I once met an old farmer who was taking a trout to the village hotel for sale. The fish weighed plump four pounds, and was a beauty. I learned that he was in the habit of bringing such fish occasionally, and on questioning him, found that he had a little spring stream of water running through his land, and that, in its course, he had dug out a deep hole—simply a hole in the ground, without screens or apparatus of any kind. The larger trout from the stream collected in this hole, and he would feed them with scraps from his table, refuse meat from his butchering, &c. With the outlay of very little trouble, and no cash, the old gentleman must have gathered a good many dollars per year from his hole-in-the-ground-trout-pond. As a hint of what may be done in fish-raising, with small means, his example is worthy of consideration."

In conclusion, it must be borne in mind that an unfauling supply of spring water is indispensable to success in trout-farming. It has happened before now, that a beginner in fish-culture has found his ponds without water, his beautiful spring dried up, and his young fry all dead. It is desirable, though not essential, to have such a fall that the pond can be drained, and it should be so managed, that a rise in the stream will not overflow the pond. Where there are these facilities, and they abound all over the country, trout-farming, if judiciously undertaken, and properly attended to, can, without doubt, be pursued with success.

WHERE THE WHEAT GOES.—The careful estimates made of the wants of England for the years '73 and '74 by the *Mark Lane Express*, are *Twelve Million Quarters of wheat*, equal to 96,000,000 bushels, an amount vastly beyond all that the United States can supply.