

There is nothing more simple than the culture of trout, whether it be for one's own use or to take to market, if a farmer has the proper facilities. That is, a cool spring of water, a brook, flowing through his land, or a brook, flowing through his premises, the summer temperature of which is not above 68 degrees. In the former case he may resort to artificial culture, and have a hatching-house, or breed them naturally. In the latter case he will be compelled to cultivate them in a natural way. This latter mode requires but little detail, let us first describe it.

If one uses a brook for the purpose, it would be better that its source was on his premises, or flowing from a wood or shaded swamp if not. If it runs through a pasture, the tramping of cattle, of course, would make it turbid at times, which although it might be no detriment to the trout, would tend to hinder them from feeding. In hatching brook in this way, the water should be led to a site where the pond would not be subject to overflow as in the natural bed, and provision should be made for discharging the surplus water in time of heavy rains. Owing ponds keep the water cooler than those which spread out in a circular or widening shape, and, of course, as the ponds are ready described they should depend in size on the volume of the stream and should not be more than half the size, for a given volume of those for bass, perch, etc.

Whether the supply comes from a brook or a spring there should be a spawning race thirty or forty feet wide, and from three to four feet wide, through which the water flows, and the head of the pond. It should be of gentle even flow and the water ten inches or a foot deep. The sides should be of plank, and made secure against frost by being nailed to staves which extend backward and are made fast in the solid ground. There should be a gate in the middle of the race where it enters the head of the pond, about eighteen inches wide, and the gate should be so constructed that it can be adjusted to slip up and down, the use of which I will presently describe. A similar gate should also be placed at the upper end of the race. The bottom, to the depth of four or five inches should be covered with pebbles from the size of a hickory nut up to an unshelled walnut. In the fall, the bottom should be covered with horse manure, when—say from the latter part of October to the middle of December—the brood fish will enter. The female shedding her spawn and the male ejecting his milt over it, it is fecundated. Pebbles or stones of this size are not easily moved by the trout in preparing their nest, the eggs therefore will fall down in the channels and crevices, which will be protected from other trout that hover around the spawners to devour them, and in making a new nest over an old one, the first is not apt to be disturbed as would be the case if the bottom was covered with gravel.

When the spawning season is over, as it will be by the first of January, the trout will go down to the deeper part of the pond. If the water does not, they should be driven down, by means of a screen with meshes large enough to keep them there should be slipped in at the lower gate. A similar screen should be placed in the upper gate, the use of which I will explain as I proceed. The eggs of trout are larger than those of almost any other fish except salmon, about the size of a pea, and together in a line measuring an inch, or thirty six to a square inch; twelve times as many of the shad would go in the same space.

After driving the parent fish down into the pond, the race should still remain covered, and muskrats, minks, and other vermin which might burrow in the pebbles and devour the eggs should be carefully excluded. The hatching will occupy from six to nine weeks according to the temperature of the water—the colder the longer. When a young trout comes out of the egg it is a mere fry, about three-eighths of an inch long, with the umbilical sac, i. e., the yolk of the egg—reaching from the throat to the middle of its body. The next helpless creature in the world, it lays on its side or stands on its head, any way that its big, not-belly happens to place it. After while as it gains strength which is furnished from the yolk contained in the sac, it begins to move about and will find its way in a few days more out of the chinks among the stones, but with an instinctive disposition to hide under the cover of them. At this time, until they begin to feed, the care should be given to them, and as soon as they appear, or even before, a screen of fine copper wire gauze, (say ten wires to the inch), should be slipped in at the lower gate, to prevent them going below into the pond to be gobbled up by their unnatural parents.

At the upper end of the race and connecting by a passage, there should be an eating saloon for this infantile community. It should be about eight feet long, and as wide as the race and closed at the upper end where the water enters by a fine wire gauze screen as already described. The bottom and sides should be of plank planed smoothly—no gravel—and the water about four inches deep. There should be a little shelf extending across the saloon to admit light or sunshine on the water from either side or end. The troutlings are given to exploration, particularly up stream, and when the yolk-sac is absorbed, and they have grown to the length of an inch or over they will commence earning their own living, or at least be looking for it, and will enter the afore-said eating-saloon, and as they gradually all get into the saloon a fine wire screen should be slipped in at the lower end to keep them there. Their food for a few weeks should be this bonny elabour or curried milt, sifted to them through a fine wire sieve in the shape of a bowl as large as one's double fist. Chopped liver made fine and sifted to them in the same way, or a little fine oatmeal with curried milt. They should be fed twice a day. A pint of curds or half as much fine chopped liver will suffice for a meal for a family of five thousand, the quantity to be increased to double by the time they have been feeding three months. You should never give more than can be consumed. Like a litter of pigs, there will be strong, weak, and some runts. They are cannibals and the big ones will eat their little brothers and sisters and cousins. We frequently find in the rearing-trough of a trout factory some over-grown youngster with the tail sticking out of his mouth. They always swallow a victim of this sort before succumb. The sides and bottom of this eating-saloon, should be kept clean by a hand scrubbing brush for the sides and the same implement nailed to handle for the bottom. A scrubbing brush in fact is required all the time to keep the screens clean, and the meshes open so that the water may flow freely and not dam in the