

# The Fish Hatchery

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IMMIGRANTS FROM EUROPE started the first hatcheries in the United States in the mid-1800's. They did a fine job of convincing the public that hatchery-reared fish were needed in nearly all our lakes, rivers, and streams. The selling point was that stocking was necessary to prevent depletion of existing fisheries by advancing civilization. So well did these early conservationists accomplish their mission, that their philosophy was deeply ingrained in public thought for many years.

The use of hatcheries in fisheries management has changed considerably since these first efforts. Today, the main purpose of public hatcheries is to help state and federal agencies meet their immediate management objective: providing maximum recreational enjoyment to all types of anglers. These agencies also have long-term goals which are geared to the wise use of our fisheries resources for future generations. To help accomplish both objectives, they use hatchery fish in many ways.

The most well-known use of hatchery fish is stocking catchable-sized trout. To satisfy intense angling pressure, trout programs maintain fishable populations in streams and lakes incapable of satisfying fishing demands with natural populations. Catchable trout programs are an integral part of most coldwater recreational fisheries management programs and annually supply millions of people with a satisfying recreational experience.

In many aquatic environments, conditions are quite favorable for good fish growth, but spawning grounds or nursery areas are not available. In this situation, fingerlings can be stocked, instead of catchables, to offset poor reproduction. Thus, the stocking agency is relieved of the cost of growing fish to catchable size. These fisheries have been appropriately named *put-grow-and-take*.

Hatchery fish are often used for restocking waters after some natural or man-made catastrophe has reduced or eliminated existing populations. The terms winterkill and summerkill describe sudden mortalities of fish due to winter or summer oxygen deficiencies in lakes or ponds. Accidental spills of toxic chemicals can cause large-scale fish mortality. Often, when such catastrophes occur, stocking hatchery fish is the only way to restore fishable populations.

After the construction of a farm pond, the fish hatchery can be called on to stock the proper

ratio of desired species. This can be accomplished through the county extension agent or Soil Conservation Service representative.

An often overlooked use of hatcheries is the production of eggs for exchange with other hatcheries on a world-wide scale. Eggs may be fertilized in the United States and shipped to other countries to be incubated. Because of rapid transportation, less space required, and lower mortality during shipment, eggs can be transported more conveniently and cheaply than hatched fish.

Many times, hatcheries are called upon to supply fish for experimental projects. By studying how the physiology and behavior of fish are affected by different environmental conditions, fisheries scientists are gaining insight into many long-standing management problems. Hatchery-reared fish help accomplish some of these studies geared to the wise use of our fisheries resources.

The word hatchery is often synonymous with trout propagation, but this is an inaccurate assumption. Hatcheries produce other coldwater species besides trout (especially salmon and whitefish), and many efforts have been made to artificially propagate certain warmwater species. The development of artificial diets for the very popular large and smallmouth bass will certainly increase availability of these species. Walleye, northern pike, chain pickerel, and muskellunge are now being stocked as predators to control large populations of stunted sunfish. Catfish are enjoying a new reputation as delicious food fish and are being cultured in the southeast on a large scale.

Fisheries managers are constantly seeking new ways of improving existing uses of hatchery fish. Trends include efforts to raise fish with more sporting qualities for use in put-and-take fisheries. Efforts to increase survival of hatchery-reared fish after stocking will mean improved and prolonged fishing.

The hatchery isn't a cure-all for the ills of fishing, but hatchery-reared fish are very important. The idea may be ancient, but there is certainly an integral place for the fish hatchery in modern fisheries management.

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