

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Bureau of Sport Fisheries and Wildlife

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FISH CULTURE AS A LIVELIHOOD

Prepared in the Branch of Fish Hatcheries

Fish hatcheries are operated by the Federal Government, by the State fish and game departments, and as private commercial enterprises. Thus, a person may become engaged in the work as either an employee or an independent private operator. This leaflet is intended to outline the opportunities, limitations, and requirements of hatchery work for the benefit of those who are considering it as a possible livelihood. This leaflet does not cover regular commercial fishing or the guiding of sport fishing parties.

EMPLOYMENT POSSIBILITIES

About 400 permanent employees are required to man the Federal fish hatcheries. All the permanent employees are appointed from lists of qualified Civil Service eligibles. Several hundred more are employed seasonally - in the spring and summer; they are generally recruited from the immediate vicinity of the hatcheries, and their work is of short duration. The turnover of permanent employees is low in normal times, and the opportunities for placement are correspondingly limited.

The State hatcheries employ approximately 1500 fish culturists and laborers. The policy of selection of employees varies among the States. In many of them, civil-service procedures are followed. In most of the States, employment is restricted to residents. Commercial hatcheries also employ workers, but the employment at private establishments probably does not exceed 1,000 persons.

It is therefore evident that the nationwide total of fish-hatchery workers is less than 3,000, and there is little prospect of any marked expansion. Since newcomers can be employed only as replacements, there are no grounds for listing fish-cultural work as a vocation capable of absorbing more than a limited number of additional employees.

HATCHERY OPERATION AS A BUSINESS

Privately owned commercial trout hatcheries have been in operation for a great many years. These establishments range from small units conducted in connection with farming or ranching to a few large plants operated full-time to raise trout for sale as food and for stocking and to sell eggs. A few establishments propagate other species, principally bass, catfish, and

sunfish, which are sold to clubs or State agencies for stocking purposes, and buffalo fish, which are sold for food. A few large units propagate goldfish and other ornamental fishes, as well as minnows for bait. These existing commercial hatcheries are able to meet demands in normal times, so that it is difficult for the small operator to make a living in this field.

Commercially reared trout sold for food are relatively high priced, and the capacity of the market to absorb increased production is questionable. Similarly, outlets for eggs and young fish for stocking are limited. Also, imported trout are now providing keen competition for domestic growers. Any great influx of new operators into the field of private commercial fish culture probably would have a depressing effect upon markets, although limited increases might be absorbed.

As in any other business, a commercial hatcheryman who has the advantages of adequate financing, a superior location and some experience will enjoy better prospects of success. The individual who is propagating fish as a sideline and is not dependent upon the income from this source for his livelihood will also be in a more advantageous position. Anyone contemplating the development of a commercial fish-cultural project should first give careful study to potential markets and know beforehand where he can sell his production. Ordinarily, trout are marketed through commission merchants in large distributing centers or directly to seafood wholesalers, restaurants, hotel chains, railroad dining-car services, and airlines.

Among the fish-cultural activities increasing in popularity is the operation of establishments that provide fishing for the general public at a fee. Such a plant consists of ponds, pools, or a stretch of stream kept constantly stocked with game fish from a hatchery. Income derived from an entrance fee, a charge per pound of fish taken, or a combination of these. The operator of such a project provides his own market for his hatchery production and may get additional revenue from rental of boats, sale of bait, or other related sidelines. Location is the all-important element for such an enterprise.

The propagation of trout requires an abundant and constant water supply such as is obtained from large springs that have year-round temperatures between approximately 45°F. and 70°F., fifty-five to sixty degrees being most desirable. This requirement sharply limits the opportunities for starting a trout hatchery. It further adds to the initial cost, as good trout waters or large springs are valuable properties because of their scarcity even in areas within the normal range of trout.

The production of minnows of various species for sale as bait to sport fishermen has greatly increased in recent years. Under favorable conditions this activity may be profitable, although complete understanding of requirements is necessary for success.

EXPERIENCE REQUIRED

Fish culture requires specialized techniques which are not readily

learned in any other activity. Some schools and institutions offer courses in basic subjects such as disease and nutrition, but few provide training in practical hatchery work. The individual entering this field must therefore acquire his experience by working at a fish hatchery. As already indicated, the opportunities for learning while earning are limited.

The principles of fish culture can be acquired from the various books, pamphlets, and bulletins which are available from Federal, State, and private sources; but there are many details of management which will escape the attention of anyone depending solely upon written instructions. If the start at managing a hatchery has been made in a small way, the inevitable losses from diseases, improper feeding, and incorrect design of ponds will not be serious. If, however, a considerable amount has been invested in a hatchery project which is to be managed and operated by someone who lacks experience, the losses may be disastrous. In short, anyone who has access to a suitable site can start the propagation of trout, or possibly other species, on a limited scale and learn as he goes. An investment of a few thousand dollars will provide a small battery of rearing ponds and simple hatching facilities. If, however, a project of any magnitude is considered, the location and suitability of water, as well as the construction, should be determined by someone who is familiar with hatchery layout and design, and the operation should be supervised by an experienced fish culturist until the owner has gained familiarity with the problems of caring for eggs, fry, and adult fish, of detecting and combating diseases, and of feeding.

Anyone who contemplates engaging in fish culture as a commercial enterprise is urged to visit a number of Federal and State hatcheries and to discuss with hatchery personnel the problems attending such a venture. Contact should also be made with hatchery supervisors in the offices of the State fish and game departments, and in the regional offices of the Bureau of Sport Fisheries and Wildlife (see list on last page). State and Federal fishery agencies will provide technical advice, and private consultants will provide more detailed assistance. These sources of information should be utilized before any final action is taken to establish a commercial hatchery.

GENERAL CONSIDERATIONS

The operator of a commercial fish hatchery must have a permit or license issued by his State fish and game department. The regulations governing hatchery operations and the marketing of fish vary among the States.

The trouts are the species most amenable to artificial propagation. Warm water or pan fish and bait minnows are reared in hatcheries which are seminatural ponds designed to afford optimum conditions for natural reproduction. Many other species, particularly marine varieties, cannot be reared beyond a few days after hatching and consequently offer no prospect for profitable propagation.

Just as individuals who set up a small home aquarium as a personal hobby have gradually expanded to the commercial breeding of fancy tropical-aquarium varieties and goldfish, so land owners who "played around" with trout or other game fish have developed their hobby to a commercial basis.

The number of individuals who have started with no background of experience or previous interest and have established themselves as commercial operators on a profitable basis, is quite limited. Anyone who is attracted by the outdoor nature of the work but has no other special qualifications, should realize that fish culture is a field which can accommodate only an extremely limited number of practitioners. Here, as in any other activity, experience, industry, sufficient capital and, above all, favorable natural locations for private establishments, are necessary.

The Bureau of Sport Fisheries and Wildlife will be glad to send to anyone who is interested a copy of its Fishery Leaflet 448, listing fish-cultural publications, or other available information concerning specific fish species.

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