

Fee-fishing:

A business idea for doubling the farmer's income

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Recreational fishing or sport fishing is one of the most sought after adventure tourism activities and has a booming international business opportunity. Like sport fishing, fee-fishing is a concept of paying for the right to fish or paying for any fish that is caught and is rapidly becoming popular among anglers. Fee-fishing offers many aspects like family entertainment (both fun and educational), no fishing license is required and gives younger anglers a chance to learn how to catch fish successfully. A better, more complete concept of a fee-fishing operation takes into account that the visitors or guests, view fee-fishing in the larger context of a tourism experience, instead of fishing in densely stocked ponds as only one component.

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AQUACULTURE is culture of Aquatic animals and plants in a controlled environment. It is an important food producing segment in India as well as in the world. Due to increase in the population, demand of fish is also increasing day-by-day and because of increased national fish consumption, aquaculture offers farmers, an opportunity for enterprise diversification. In particular, fee-fishing has agriculture and tourism linkages that makes it an unique aquaculture enterprise.

Fee-fishing is the practice in which anglers pay to catch fishes in privately owned ponds. It can provide profits for the owner, social and recreational benefits for the community, and a market for locally produced fish. Fee-fishing is more than just inviting anglers to come to fish in densely stocked ponds. In countries like United States, fee-fishing is a common practice because of possibility of privately owned ponds and lakes that have been stocked with fish and to which access can be gained by anglers. Charges for recreational

fishing are usually assessed on the basis of the weight of fish caught. Many fee-fishing operators are also fish culturists. They may produce fish only for stocking their facilities, or they may stock their own water bodies and sell excess fish to other culturists for fee-fishing operations. Fee-fishing has been present in the United States for at least a few decades. In Brazil, fee-fishing is a more recent development, one that absorbs a large percentage of the fish produced by commercial aquaculturists in that nation. In India, we can also adopt such type of fishing technique to generate tourism as well as extra income from the available water resources.

Types of fee-fishing operations

There are three basic types of fee-fishing operations:

- **Day leases or "ticket" lakes:** Day leasing involves collecting a daily use fee from anglers, allowing access to given water body and catch fishes. Owners stock fishes in ponds for the anglers. Both natural production and occasionally

stocked fish support the anglers' harvest. Pond management is an important factor and pond owners are responsible for the same. In some cases, especially with day leasing, the ponds may be stocked with catchable-size fish such as channel catfish.

- **Long-term leases:** Long-term leasing involves the leasing of exclusive fishing rights on a long-term basis similar to hunting leases to an individual or group. Fishing success relies on the natural production of the leased water body. Medium to large ponds are best suited for long-term leases.
- **Fish-out operations:** Fish-out ponds are stocked with high densities of catchable sized fishes. The angler is then charged for each fish caught or can be limited as to the number that can be taken.

Management of food fish and water quality

Management of good water quality and fishing ponds is very important aspect in any type of fish culture system. The success of any

farm depends on the management of the water quality not only to the health and matchability of the fish, but also to the corresponding economic success of the business. So, it's very important to understand the basics of fisheries management to reduce financial losses. This publication suggests guidelines for management of the water and fish to improve fish health, reduce fish mortality and increase angler catch rates, thereby increasing the overall profitability of fee-fishing operations.

Water quality parameters that affect the growth of fishes should be monitored on a regular basis in the fee-fishing pond. Some most important parameters are dissolved oxygen, pH, alkalinity, ammonia and nitrite. Different types of chemical test kits and meters are available in market to test these water quality parameters.

Species of fish

Stocking of desirable fishes is also an important step in fee-fishing. The stocking of fishes should be done based on the local consumer or angler's preference. Farm raised fish are superior to wild-caught fish because farm raised fish are usually available in consistent quantities, are already conditioned to crowded pond environments and can consume formulated feeds. Farm raised catfish are popular because of their availability, catchability, hardiness and desirability as a

food fish. Channel catfish are the predominant farm raised species and are, therefore, the most readily available and most commonly-stocked species. In warmer regions of the country, catfish is the most logical choice for stocking fee-fishing ponds, but hybrid sunfish, bass, crappie and even tilapia have been utilized (where permitted). In cold water sources like springs and mountain streams, rainbow trout would be the best desirable candidate species. However, walleye and other species also have been used in fee-fishing businesses. Again, rules and regulations of different country and states largely determine which species can be considered for any particular operation.

Channel catfish (*Ictalurus punctatus*), largemouth bass (*Micropterus salmoides*), and rainbow trout (*Oncorhynchus mykiss*) are commonly used for fee-fishing in United States. Historically, some crawfish (*Procambarus* spp.) producers in Louisiana opened their ponds to those willing to pay for the privilege of trapping the desirable crustaceans. In Brazil, various native species, including some of the Amazon river region catfish, have been stocked in fee-fishing ponds. Tilapias (*Oreochromis* spp.), which are exotic to Brazil, can also be found.

Location

It is very important to keep some things in mind for successful fee-fishing that is having a good location, knowing your clientele, providing good facilities and services, and operating like any profitable business. The site must be carefully chosen, developed and promoted to attract a large group of anglers to have a successful and enjoyable fishing experience.

The most successful fee-fishing operations are within 40–60 km of a 50,000+ population center. Locating in a high-traffic area (major highway or intersection) increases the number of people who pass by and have a chance to see the operation. One should not locate near an existing fee-fishing operation unless confident that there are enough customers to support more than one facility. Ponds should also be located in a natural setting screened from urban distractions having easy access and plenty space for parking.

How fee-fishing system work?

The people who want to work as small scale or small operation should purchase the fishes and stock directly into the pond since, small facility may not have sufficient physical space to maintain broodstock, hatch eggs and rear fish to table size. If the owner/operator is satisfactorily trained and has the space and personnel, maintaining spawning and rearing facilities may be the most desirable approach for fee-fishing. Having the complete life cycle under control of the culturist helps ensure a good supply of fish of known quality and in large facilities, may provide significant cost savings relative to purchasing fish of catchable size. Another option is that owner can purchase fingerlings size fishes and rear them in different pond to reach a size at which, they can be stocked

Table 1. Optimum water quality parameters for fish pond

Parameter	Optimum level
Temperature (warm water)	25–35°C
Colour	Green-brown
Transparency	25–30 cm
Turbidity	<300 ppm
Dissolved oxygen	5–7 ppm
Carbon dioxide	<15 ppm
pH	7–8.5
Alkalinity	40–200 ppm
Ammonia	<0.025
Nitrite (NO ₂)	<0.1 ppm
Hydrogen sulphide (H ₂ S)	<0.002 ppm
Plankton	>25 ml/m ³



Rainbow trout



Channel cat fish



Largemouth Bass

into fee-fishing ponds. While the fish within a fee-fishing pond varies in size, any that are caught should all be considered keepers by the anglers who fish for them. This is because, in most instances, fees are assessed based on the weight of the fish caught. By stocking heavily and limiting the amount of supplemental food provided in fee-fishing ponds, the fee-fishing operator can ensure that most anglers will catch fish relatively quickly and easily. As time passes, fishes that have been caught and surreptitiously released or hooked only to escape, will learn to avoid a lure or baited hook. As a result, over a period of time, angler success may decline, even though there are plenty of fish in the pond.

- At most fee-fishing locations, anglers are required to keep all fish landed, a practice that could become contentious if the fish were considered too small to take home. Another alternative is to charge a set rate and allow anglers to take home a specified maximum number of fish.
- As an incentive to keep anglers fishing as well as to keep them returning for more, once they have put a number of fish in the creel, fee-fishing operators may tag one or more fish that if caught, will carry a reward rather than a cost to the angler.

Other facilities

People come to fishing for entertainment, so with the fishing other sources of entertainment would be very helpful for business. For this purpose with the fee-fishing, a cafe and snack bar, bait shop should supply not only live bait, if used, but also fishing tackle for purchase



Fish catch by angling in Kashmir (Source: <https://kashmirtourdeals.com/destinations/fishing-in-kashmir>)

or rent. Ice and coolers, sunscreen, first-aid supplies, and a number of other products that anglers might need are often made available. Toilet facilities, typically in the form of portable outhouses, should be readily available to customers. Coin-operated fish-feed dispensers may also be provided near rearing ponds, so that for a cost, anglers also have the opportunity to feed fish that are being grown for future stocking. Once the anglers decide to depart, they have their catch weighed, and the fee is assessed. Many operators clean the catch for an additional charge. The success of fee-fishing operations depends not only on providing anglers with a successful fishing experience, but also on location and expectations of anglers. Careful study of angler preferences, in terms of the species available for capture and the amenities considered desirable or indispensable, along with the level of interest, the willingness of potential customers to use the facility, and

the frequency of use, helps ensure success.

SUMMARY

It's very important to know that fee-fishing is both an agricultural and a tourism activity and is used as a recreational business. Success is based on repeat customers, and good word-of-mouth advertising. A repeat customer is one who caught fishes and had a good time. An attractive, well-managed pond with consistently good fishing and friendly service will keep customers coming back. Other factors that determine success are location, facilities, services and management. Medium to large ponds with best management practices are best suited for long-term leasing, while small ponds can be day-leased or used as fish-out ponds for fishing.

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Water

Even though households are relatively low consumers of water, population growth and expanded water use have outweighed the effect of water saving technology and behavior.

- Less than 3% of the world's water is fresh (drinkable), of which 2.5% is frozen in the Antarctica, Arctic and glaciers. Humanity must therefore rely on 0.5% for all of man's ecosystem's and fresh water needs.
- Man is polluting water faster than nature can recycle and purify water in rivers and lakes. More than one billion people still do not have access to fresh water.
- Excessive use of water contributes to the global water stress. Water is free from nature but the infrastructure needed to deliver it is expensive.

- See more at: http://www.unep.org/wed/theme_water.asp#sthash.ki5vg3lB.dpuf
Courtesy: United Nations Environment Programme website - <http://www.unep.org/wed>