

FISHERMEN EXPECTATIONS and PAY-LAKE PROFITS



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ABSTRACT

Personal interviews with licensed fishermen in Central New York State were used to determine characteristics of fishermen who are willing to pay to fish. Willingness to pay was related to aspects of the fishing experience that most strongly influenced fishing enjoyment. Sixty-two percent of the respondents expressed a willingness to pay for a quality fishing experience. Study results suggest that much instability in the pay-lake fishing market may be due to the failure of individual operators to adequately consider all of the costs involved in providing quality fishing experiences.

PEOPLE WHO run commercial recreation businesses have responded quickly to the demands for outdoor recreation services and facilities. Yet most of the growth in commercial outdoor recreation has occurred haphazardly, without benefit of information about consumer markets. This has been true of commercial pay-lake (a pond or lake where people pay for the privilege of catching fish) enterprises.

Profits from commercial pay-lakes have seldom met owner expectations. Case studies have shown that pay-lake operators seldom make enough profit to pay for their own labor (*Jordan 1962; Owens 1964; Street 1967*). Yet, this study and other similar ones indicate that a significant proportion of fishermen say that they are willing to pay to fish. Surveys of licensed fishermen in the Northeastern States revealed that 33 to 50 percent were willing to pay a landowner for the opportunity to fish on his land (*Bevins et al. 1968*).

Why then have commercial pay-lake operations met with limited financial success? Part of the instability in the pay-lake market may

be due to an inadequate consideration of what the commercial operator can profitably provide as opposed to what people expect from and are willing to pay for pay-lake fishing experiences.

THE STUDY

The information presented here was obtained from personal interviews conducted during the summers of 1969 and 1970 with 95 adult licensed fishermen. Respondents were randomly sampled from anglers who fished in three ponds managed by the State University of New York College of Environmental Science and Forestry. Each fisherman was interviewed to determine his past fishing experience, socio-economic background, and fishing expectations.

The three ponds are located 20 miles south of Syracuse, New York, on the Heiberg Memorial Forest. In addition to student instruction, the ponds are used for limnological and fisheries research. The College fishing

project began in 1965. Since then the ponds have provided 1,405 days of fishing for 543 fishermen.

The ponds, ranging in size from 5 to 14 acres, are located at the base of rolling terrain and are surrounded by conifer and deciduous trees. In their setting they look more natural than man-made. Fishermen often comment on the enjoyment they receive from the natural beauty of the pond surroundings.

Fingerlings, 2 to 4 inches long, are stocked annually, with alternate stockings of brook and rainbow trout. The number of fish caught and the time required to catch fish varies considerably from pond to pond, over the season, and from year to year. During the first 4 years of the fishing project, fish caught averaged 11.8 inches in length and 12.4 ounces in weight. Fishermen who participated in the College project fished for an average of 3.5 hours each time.

These fishermen were required to provide information about their catch and were encouraged to give information about their fishing experience. Pond fishing pressure is controlled through permits, which are issued on a first-come, first-served basis, and are returned before leaving the pond. Written on the fishing permit is the question, "If the Heiberg ponds were under private ownership, what is the maximum amount you would be willing to pay for a permit that would allow you to catch, 3, 5, and 10 trout, recognizing that the permit would not guarantee catch success?" Answers to the question were provided by 350 anglers.

STUDY RESULTS

Description of Study Group

Respondents were all residents of central New York State. They traveled a one-way distance of less than 30 miles to the Heiberg ponds. Males accounted for 87 percent of the study group. The anglers averaged 42 years in age. They averaged 17 fishing years experience and had spent an average of 14 days fishing during the year before the survey. Fifty percent did most of their fresh-water fishing in ponds and lakes, 37 percent fished

in rivers and streams, and 13 percent fished about equally in both. Twenty-eight percent of the respondents owned fishing boats, and 37 percent owned outboard motors. Fourteen percent of the fishermen surveyed had previously paid to fish in a commercial pay-lake.

Professional people made up the largest occupational group (25 percent), followed by managers and service workers (12 percent each). Craftsmen, clerical workers and housewives each made up 8 percent of the sample. Students accounted for 14 percent, and retired people accounted for 8 percent. The remaining 5 percent were laborers. Fishermen in the work force worked an average of 43 hours per week during the summer and had an average of 20 hours of free time per week.

Fishermen from whom data were collected were sampled from among licensed fishermen who agreed to participate in the Heiberg research project by obtaining a permit and providing information about their catch. Therefore, a question may be raised about whether or not the group surveyed was representative of the general fishing public. In terms of background characteristics—age, sex, fishing experience, and occupation—the survey group compares closely with characteristics of licensed, freshwater fishermen found in surveys of the general fishing public (*Bevins et al. 1968*).

Comparison Between Willingness-To-Pay Groups

Fishermen were divided into two groups based on their willingness to pay for pond fishing. Statistical tests were run to determine the differences between the two groups in background characteristics and fishing expectations. Results of these comparisons should be useful to pay-lake operators in directing their marketing programs toward those fishermen who are most likely to pay to fish.

Fisherman Characteristics

Significant differences were found to exist between characteristics of fishermen who would and those who would not pay to fish. Fishermen over 40 years of age were less

willing to pay to fish than younger anglers. While 70 percent of the younger group said they would pay, only 53 percent of the older fishermen felt the same way.

Educational background was also related to willingness to pay. Forty-seven percent of the anglers with high school degrees or less said they would pay to fish as compared to 73 percent of fishermen who had attended college.

The amount of free time available—time not devoted to work, household chores, or family responsibilities—was significantly related to a fisherman's willingness to pay. Seventy-three percent of fishermen having an average of 20 hours or less of free time per week were willing to pay as compared to 47 percent of those having more free time.

Whether or not a fisherman had previously paid to fish apparently had an influence on his willingness to pay in the future. Of those fishermen who had previously paid to fish, 92 percent were willing to pay, while only 49 percent who had not previously paid felt this way.

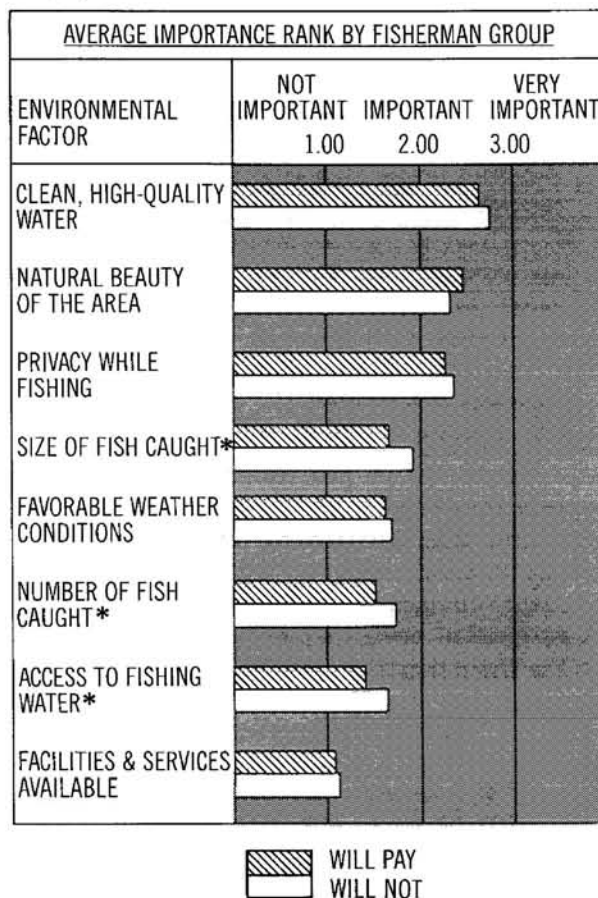
From a marketing standpoint, fisherman characteristics that were not associated with willingness to pay may be more important than those that were. For example, it was felt that a fisherman's background residence—where he lived during childhood—would have a relationship to willingness to pay. However, study data did not support this notion. A fisherman's occupation, the amount of time devoted to his primary job, the number of years he had fished, and the type of fishing equipment he owned and whether he had previously fished in the Heiberg ponds had no relationship to his willingness to pay.

Fishing Expectations

Fishermen were asked to rank the relative importance value of eight factors that influenced their enjoyment of a typical, 1-day fishing trip (fig. 1). Although the factors did not include all of the many elements that influence fishing enjoyment, aspects of the fishing experience that can be partially influenced by pay-lake operators were considered.

Regardless of their attitude toward payment of a fee, fishermen consistently ranked

Figure 1.—What fishermen look for in a fishing experience and their willingness to pay to fish.



*Significant differences between groups at the .05 level, using the chi square test.

three factors—clean water, natural beauty of the fishing area, and privacy—as having the greatest influence on their fishing enjoyment (fig. 1).

Size and number of fish caught were ranked fourth and sixth, respectively, in overall importance by both groups of fishermen. However, there was a significant difference between the magnitude of the two rankings. Fishermen who were not willing to pay a fee ranked the size and number of fish caught as being more important to their fishing enjoyment than fishermen who were willing to pay. Access to fishing waters, seventh in overall importance, was more important to those fishermen who

would not pay to fish than to those who would pay (fig. 1).

Few differences were found in the way the two groups ranked the eight factors. Therefore, fishermen desire much more from their fishing experience than merely catching fish. They want quality fishing experiences in uncrowded, beautiful, natural surroundings. Whether or not this kind of experience can be provided at a profit depends on how much fishermen are really willing to pay for such an experience and on whether other fishing areas are available that provide such an experience at a lower or no cost.

Amount Fishermen are Willing to Pay

Three out of five fishermen in this study said that they would be willing to pay for a permit that would allow them to catch 3, 5, or 10 trout, with no guarantee of success. Data summarized from 350 permits were used to develop price frequency curves for each of the three permit levels. These curves show the

percentage of fishermen who said they would pay a specific amount or more for each permit (fig. 2).

All willing fishermen said that they would pay at least \$0.50 for a 3-fish permit, \$1.00 for a 5-fish permit, and \$1.75 for a 10-fish permit. Half of them were willing to pay at least \$1.50 for a 3-fish permit, \$3.00 for a 5-fish permit, and \$4.50 for a 10-fish permit. Forty percent of the fishermen stated that they would pay \$5.00 or more for a 10-fish permit, and 15 percent indicated that they would pay \$10.00 or more, even without the assurance of catching fish (fig. 2). It should be emphasized that the fishermen were not only reacting to their willingness to pay a fee to catch fish, but to their willingness to pay for the total fishing experience.

DISCUSSION

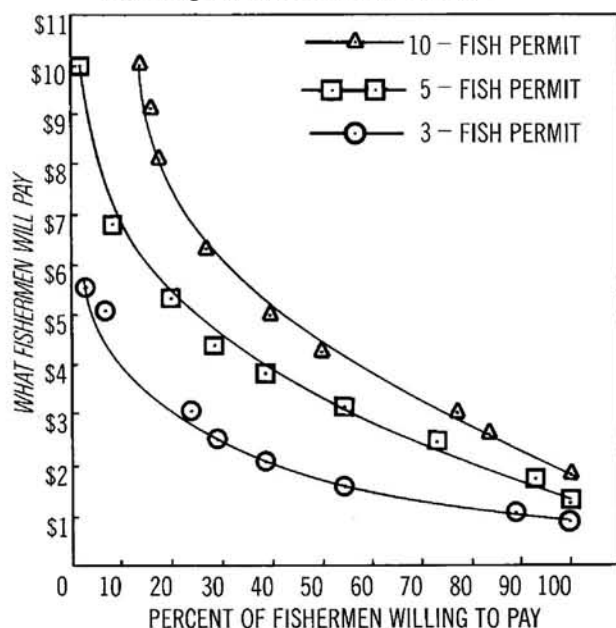
Pay-lake operators need to provide a complete fishing experience—an experience that is in direct competition with other similar experiences available at no charge. The question pay-lake operators must ask is, can such an experience be provided at a profit?

The concept of "carrying capacity" may be useful in developing a pay-lake marketing program. Carrying capacity refers to the amount of fishing use that a given lake can sustain without substantial reduction in the quality of fishing experience. Carrying capacity must be evaluated in the context of what the fisherman is willing to pay for a given experience in relation to what it costs to provide that experience.

The biological carrying capacity of a lake can be influenced through management practices. Most pay-lake operators rely on periodic stocking to insure an abundance of catchable fish. Pond fertilization and fish feeding can help to insure fish survival. Damage to other physical aspects of the fishing environment can be controlled through site reinforcement—construction of walkways, fencing, tree plantings, etc.

Carrying capacity is also influenced by the number of fishermen who use a lake. As crowding increases, the carrying capacity of

Figure 2.—Amount fishermen are willing to pay for 3-, 5-, and 10-trout permits. Data summarized from response of 350 licensed fishermen who said they would pay to catch stocked trout in the Heiberg Forest ponds, with no guarantee of catch success.



a lake decreases because of a reduction in the quality of fishing experience received. The carrying capacity may be limited more by factors that influence the quality of fishing experience than by biological characteristics of the lake.

The pay-lake operator must try to insure that the carrying capacity of his lake is not exceeded. One real difficulty he faces is that the quality of the product he produces (a day's fishing experience) is reduced as his level of production increases. As more and more fishermen use his lake, the quality of experience goes down. Of course, to combat this situation, the operator can restrict use to the level at which a quality fishing experience will be provided. The real question, however, is whether this level of use is high enough to allow him to make a profit.

The Heiberg experiments are a case in point. Quality fishing is maintained through stocking and controls on the number of fishermen who are allowed to use the ponds at any one time. The maximum number of fishermen allowed on a pond is three per day. Fishermen overwhelmingly are willing to pay for the experience—but the ponds are not operated for profit. Although data have not been compiled, it is reasonable to assume that the cost of providing this exceptionally high quality experience would be much greater than the revenue that would be received if the ponds were operated commercially.

Although this study does provide some insights about the characteristics of potential pay-lake consumers, further market study is

needed to determine the influence of accessibility to free public fishing waters on a fisherman's willingness to pay. Furthermore, this study only considered fishermen who were licensed to fish and who came to the Heiberg ponds to fish for trout. Whether these are typical of clientele at commercial pay-lakes remains to be determined.

The information collected in this study is admittedly limited. However, some important questions are raised that pay-lake operators should ask themselves before making additional investments:

- Whom can I serve?
- What kind of fishing experience can I provide that is not readily available at no charge?
- What are the costs involved in providing a fishing experience that is not readily available elsewhere?
- Do I have the resources to provide the quality fishing experience desired?
- What are people willing to pay for the experience?
- Can I make a profit?

There are no easy answers to these questions. The answers must be determined individually for each pay-lake operator. Unless the commercial pay-lake operator tries to answer these questions honestly, the pay-lake fishing market may continue to be as uncertain as it has been in the past.

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