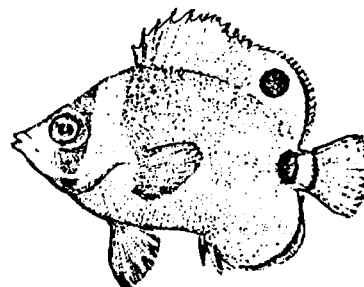


GETTING STARTED WITH PRAWNS

So you want to go into business for yourself? There's big money in prawns! Or is there? The following article from the University of Hawaii is used by the University Extension Service to generate interest in raising prawns. The article presents a great deal of information in a small amount of space. The questions keyed to various paragraphs are designed to help you find the important ideas and concepts. Skim the article before you begin to answer the questions so that you will have some idea about what the authors are trying to do. Then go back and answer the questions in order. The information needed to answer a given question is found within the bracketed section attached to the question. Good luck and send me an invitation to your "Grand Opening Prawn Sale".

**University of Hawaii
Sea Grant College Program**



Marine Advisory Program

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Getting Started With Prawns – by John M. Shklov and C. Richard Fassler

Capital Investment and Operational Costs

1. What are fixed costs?

Costs of constructing and operating a prawn farm vary considerably. For example, it will be more expensive to construct ponds on sloping land than on level land. On the other hand, certain costs are fixed and are the same for a large or small operation. The cost of land will depend on the location and the lease rent. Exact cost figures cannot be provided, but it is possible to estimate how much capital is needed for constructing and operating a 10-acre farm.

2. What would the total estimated construction outlay be if the drilled well was 400 feet deep? Please show your work.

Construction cost includes pond design preparation, an access road, a drainage system, and pipes. The cost of these is approximately \$45,000. The cost of digging a well is about \$150 a foot. For an 8-inch diameter well, 300 feet deep, the expense is another \$45,000. (It is important to remember that the depth of a well may range from 100 to 400 feet). Adding the cost of a work and storage shed (\$3,000), the total estimated construction outlay is \$93,000.

3. Given a conservative inflation rate of 10% per year what is the expected total equipment cost in October 1980? Please show your work.

Equipment needed includes a 700-gallon per minute, 10-horsepower pump (\$8,000), a harvesting net (\$1,000), a truck (\$7,000), a dissolved oxygen meter (\$700), and miscellaneous items (\$4,000). Total equipment cost is then about \$27,000. Adding this to the construction expense gives a total of approximately \$113,700.

4. At an average price of \$7.50 per 1000 juveniles, what is the value per acre of the gift of juvenile prawns from Anuenue Fisheries Research Center? Please show your work.

Other operating costs include labor, feed, juvenile prawns, interest on the construction loan, lease rent, electricity, gas, etc. If you are willing to enter into a cooperative agreement with the State, the Anuenue Fisheries Research Center will stock your first 20 acres of ponds free-of-charge for three years. If you have more than 20 acres you will have to pay for juveniles for the extra acres on a cost basis. The cost ranges from \$6 to \$10 per 1,000 juveniles. The stocking rate is 70,000 juveniles per acre per year. In return, you will sign a contract that stipulates that you will maintain your ponds according to Anuenue's standards, keep accurate records, and allow your ponds to be used for experimentation. You may sell the prawns and keep the income.

5. If you had to purchase your brood stock for your 10 acre pond, what would be your total "start-up" capital requirement be?

Thus, there is no charge for juveniles and if the cost of leasing land is \$450 per acre per year, operating expenses for the first year of production is approximately \$67,600. The total "start-up" capital for a 10-acre prawn operation is then about \$181,300.

6. Incorporate your answers to numbers 2, 3, and 5 and give a revised total:

Estimated construction and operational costs for a 10 acre prawn farm	
Construction cost	\$93,000.
(access road, drainage system, pipes, well, work and storage shed).	
Operational cost	
Equipment	20,700.
(pump, harvesting net, truck, dissolved oxygen meter, etc.)	
Other	67,600.
(labor, feed, juvenile prawns, loan interest, lease rent, electricity, gas, etc.)	
Total	\$181,300.

7. If the wholesale price drops to \$3.50 per pound, what is the expected profit?

The next step is to consider what kind of production to expect and what kind of profit can be realized. The current average prawn production is 2,500 pounds per acre per year, with the best farms reaching more than 3,000 pounds. If we take a very conservative figure of 2,250 pounds per acre for the first year and multiply it by the current average wholesale price of \$3.75 per pound, an income of approximately \$8,437.50 per acre or \$84,375 for 10 acres can be expected. Subtracting the annual operating expense of \$67,600 from \$84,375 leaves a profit of \$16,775.

8. There is an error in this passage. To determine the break-even price divide the annual operating cost by the annual yield of prawns in pounds. What would be the break even price if the costs rose to \$78,000 per year? Please show your work.

In order to determine the break-even price, divide the annual operating cost by the annual income. The result is that prawns sold at a price greater than \$3.00 per pound will yield a profit.

9. If expenses dropped to \$60,000 per year what would the new rate of return be? Please show your work.

The rate of return for operating a prawn farm can be calculated by dividing the annual profit by the annual operating cost. This return, 25 percent, can be increased by reducing the labor and feed expenses.

Prawns can be wholesaled at the pond site, or sold live in containers to restaurants, stores, or markets.

10. You've decided to open your own drive-in prawn shop to cut out the middle man. If your costs and yield were the same as the estimates in the article but your selling price went up to \$5.00 per pound, what would your annual profit become? Please show your work.

Prawns are often sold live in tanks where customers are allowed to select the ones they wish to purchase. Even at a retail price of more than \$5.00 a pound for the whole animal, demand has been greater than the supply. Often, the amount available is sold within a few hours.

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