

Is Your Aquaculture Plan Commercially Feasible?

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The culture of aquatic species for profit in Florida can be a risky business. Many individuals have failed financially in their bid to establish a commercially successful aquaculture venture. Because of this dubious record, potential commercial investors must place a high premium on careful financial planning and the creation of realistic expectations for business success. The technical, economic, and commercial feasibility of an aquaculture plan must be completely understood to minimize the possibility of an unwise investment.

The reasons for the failure of aquaculture businesses in Florida are as numerous as the individuals involved. Technical problems associated with adapting to Florida's heterogeneous natural environment will get many votes and so will trying to cope with a constantly evolving, yet recently streamlined, regulatory gauntlet. A recent poll of current aquaculture producers in Florida shows that aquaculture investors feel most hampered by financial and marketing constraints. Three additional obstacles include: 1) the high cost of operating in an environmentally aware, coastal state such as Florida; 2) competition from wild-caught and imported product; and, 3) the declining per capita seafood consumption nationwide. These potential damaging effects to a "well-thought-out" investment plan may inadvertently be overlooked by the too-confident, over-eager, "can't-miss" aquaculture investor.

Many questions need to be asked. Is the scale of my operation viable? When will the business cash flow? How sensitive is market price to product volume? How

deep is my market? What are my investment alternatives? Once these and many other questions are answered, then the investor needs to back up and ask.... "how many of the answers are assumptions and how many are fact?" Only then can the commercial feasibility of a potential aquaculture investment be assessed.

Technical Feasibility

The obvious first step in determining the commercial feasibility of an aquaculture plan is to answer the question, "Can I grow what I want to grow where I need to grow it?" The term "grow" implies a lot! Just because you can grow hard clams in Dixie County doesn't ensure success in Manatee County. Is the process technically feasible? A myriad of species specific issues related to mortality, growth rate, size distribution, predation, etc., must be addressed to the maximum extent possible. How do the local environmental and regulatory constraints influence the scale of operation? How long before I will be proficient with the culture technology? How do delays in proficiency translate into lost revenues? **Moral:** Learn the technology and expect to experience a learning curve.

Financial or "Economic" Feasibility

This is the stage where the investment failure trap most often is sprung. Being predisposed to investing in aquaculture, you have decided to invest because you were presented an income statement, budget, cash flow, or financial ratio analysis that looked extremely "good". The preliminary financial feasibility analysis appears attractive. Right? Don't make decisions based on someone else's analysis! Do your own homework. Such analyses often assume extremely favorable values for many financial parameters such as-- market price, production, volume, market strength, input costs, labor requirements, etc.-- and these favorable values are often assumed to be consistent over time!

Look carefully at how these parameters have actually varied over time in your location and anticipated market. What are their ranges over time? How often do they change and for how long? Then do a simple sensitivity analysis by plugging in

your own values to see how sensitive profitability really is. Warning lights should flash if deviations from assumed parameter levels substantially reduce profits and extend the time needed for the investment to cash flow. If profits are stable to expected variations in key financial parameters, the possibility of financial viability is strengthened. Again, try not to assume anything. But if you must assume due to lack of information, be conservative. **Moral:** Assume nothing, especially that the environment and markets will be consistent.

Commercial Feasibility

Financial feasibility "on paper", however, does not assure commercial success. Uncertainty exists in all aspects of the investment plan and the uncertainty associated with the grow-out process and the vagaries inherent in the market are particularly difficult to account for. Things may look great on paper, but expectations soon may be dashed as reality is encountered during the first few production periods. Commercial feasibility is achieved only after the investment plan has survived exposure to this uncertainty.

To minimize the financial risk associated with an aquaculture investment that appears attractive (but maybe isn't!), consider initially investing in a "pilot"-scale operation. This will allow you to experience these uncertainties in the production process and the market, without exposing all capital assets to the risk of failure. If the investment plan is not commercially feasible, failure of the pilot-scale operation will not result in a total financial loss. Pilot-scale success may then warrant development of the full-scale commercial operation. **Moral:** Don't try to get too big too fast!

Consider the Alternatives

Even though an aquaculture investment may pass the feasibility tests, the investor should address yet another important factor in the investment decision: opportunity cost. This should be of particular interest to someone initially considering investing in aquaculture, but hasn't yet done so. Opportunity cost represents the earnings your capital and labor could have earned in the next best

Continued on page 2

Continued from page 3

investment alternative, be it aquaculture or some other investment. Determine what your forgone earnings and value of your labor/management skills would be. If greater than the projected earnings from the aquaculture investment plan (after accounting for risk), the alternative is the best option. It may be that a boring, riskless, long-term CD may be a better option financially than an exciting, but inherently risky and marginally profitable aquaculture investment. Moral: Consider your options.

Opportunities do exist for successful commercial aquaculture investment in Florida. History has shown, however, that commercial aquaculture can be particularly unforgiving to bad investment decisions. Only the cautious investor--who fully understands the technology, assumes as little as possible, and comprehensively tests for technical, financial, and commercial feasibility prior to full-scale investment-- will minimize the potential for an unwise decision.

For additional information and materials that relate to assessing the feasibility of commercial aquaculture in Florida, please contact me at the Florida Sea Grant Program, 1170 McCarty Hall, University of Florida, Gainesville, Florida 32611.
