



# Forage Species

## Return on Investment

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In general, production strategies for producing forage fish for stocking in private waters vary greatly from state to state and even within a particular state. Production strategies for forage fish may also be species specific which often lead to additional variation in production costs. In addition, the retail nature (marketing directly to pondowners) of most forage fish sales makes the use of cost estimates from the baitfish industry difficult to use.

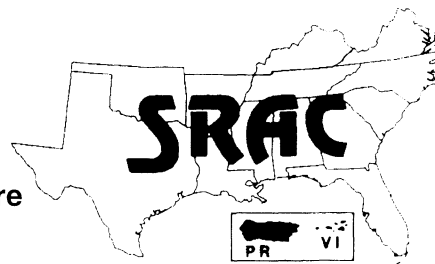
### Cost Considerations

Cost considerations that prospective producers should address should include pond construction and water supply. If extensive land clearing and dirt work are necessary to prepare a site, pond construction costs could increase substantially. In addition, water supply costs will vary depending upon aquifer depth. Costs associated with fertilizer and feed requirements may vary considerably between species and also be affected by the size of fingerlings desired for market. Broodfish costs may also vary substantially depending on availability. However, harvest equipment, hauling and holding facilities and chemical costs associated with production and marketing should not vary substantially between species or levels of production on a per acre basis.

While input costs for forage fish production are generally lower than for baitfish production (due to reduced scale of most operations), careful consideration should be given prior to initiating production of any forage species. Fortunately, ponds constructed at most retail fingerling operations are suitable for the production of a variety of species which helps to reduce the risk of adding a new species to the operation.

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### Estimates of Return

Estimates of return on investment for forage fish production may vary greatly. One contributing factor that compounds cost estimation is the retail nature of forage sales which creates problems of supply and demand within a particular region. Prospective forage fish producers should first determine if a demand for a forage species exists before initiating culture activities. If the demand for a particular forage species does exist, the second consideration should be to determine the quantity of fish necessary to meet the market demand.

Finally, prospective producers should consider the role of competition for the forage fish market in their region. Producers that offer a wide array of both forage and sport species are generally more competitive than producers of limited numbers of species. In addition, refined live hauling techniques have resulted in an increase in competition from non-local producers.

(See back of page for sample budget.)

**Twenty-Acre Farm**  
**Sample Budget for Threadfin Shad Production in a One Surface Acre Pond**  
**(Marketed Retail)**

**Projected Income:**

50,000 1 - to 3- inch fingerlings at \$0.08 each – \$4,000.00

**Expenses:**

Variable Costs	Fixed Costs	Other Costs	
Broodfish (100/surface ac @ \$0.08 each) \$ 8.00	Depreciation	Insurance	\$ 50.00
Cottonseed meal (500 lbs @ \$10.00/cwt) 50.00	Pond construction (\$4,000-10 years) 400.00	Taxes (except income tax)	10.00
Inorganic fertilizer (5 gals 10-34-0 @ \$3.00/gal) 15.00	Truck (one-ton) 200.00	Interest on capital outlay	500.00
Floating catfish ration (8 lbs/day, 5 days/week = 480 lbs @ \$9.00/cwt) 43.00	Service roads 10.00	<b>Total fixed costs</b>	<b>\$1,447.00</b>
Water pumping (4 ac-ft @ \$30/ac-ft) 120.00	Well/pump 200.00	<b>Total costs</b>	<b>\$2,178.00</b>
Labor (75 hours @ \$5.00/hour) 375.00	Seines 10.00	<b>Net return to management</b>	<b>\$1,822.00</b>
Fuel 100.00	Transport tank 2.00		
Chemicals 20.00	Holding facility 50.00		
<b>Total Variable Cost</b> \$731.00	Other equipment (tubs, etc.) 15.00		

For more information about aquaculture in Oklahoma, see our OSU county Extension agent or contact Marley D. Beem, Extension Aquaculture Specialist, 303J Ag Hall, Stillwater, OK 74078-6013 (phone: 405-744-9636).

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