

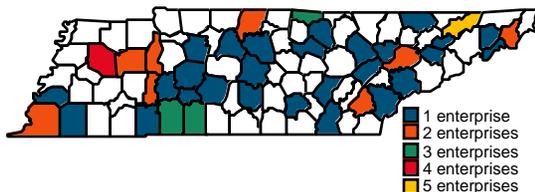
In January 2000, The University of Tennessee Vice President for Agriculture, Dr. Jack Britt, and The Tennessee Commissioner of Agriculture, Mr. Dan Wheeler, appointed an Aquaculture Task Force. Among other responsibilities, the 12-member Task Force was asked to estimate the scope of the existing commercial aquaculture industry in the state.

This brochure provides a brief overview of the results of a survey conducted by the Task Force during May and June 2000. A telephone survey list of 292 was assembled from a variety of sources. Many of the contacts on the list were no longer in aquaculture, deceased or had incorrect numbers. The final list of potential survey participants included 148 names of which 73 completed the survey for a response rate of 48%. While freshwater shrimp production is recognized as a developing enterprise in Tennessee, the survey results indicate that early adopters in that enterprise were not included in the survey sample.

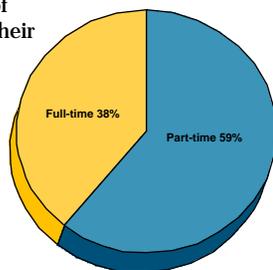
## Survey Results

Of the seventy-three completed surveys received for this study—61 considered themselves to be actively involved in aquaculture while 12 were planning to get into aquaculture.

As presented below, those in aquaculture had operations in 40 counties representing 42 percent of Tennessee's 95 counties.



Fifty-nine percent of respondents considered their aquaculture enterprise part-time. Sixty-six percent of the part-time operations reported less than \$1,000 in annual gross sales while 65 percent of the full-time operations reported more than \$50,000.



Catfish, tilapia and fee-fishing operations were more likely to be part-time operations while trout, baitfish or ornamentals were more likely to be full-time.

Percentage of Full-time and Part-time Enterprises		
	Full-Time (%)	Part-Time (%)
Catfish	21.2	78.8
Trout	71.4	28.6
Tilapia	43.0	57.0
Baitfish	100.0	00.0
Fee Fishing	20.0	80.0
Ornamentals	60.0	40.0
Sport/Game Fish	50.0	50.0

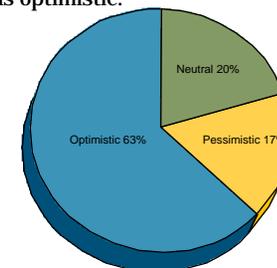
Ponds are the most common production system for catfish, baitfish, ornamentals and sport/game fish. Raceways are most commonly used for trout. Closed recirculation systems are used primarily for freshwater shrimp nurseries and tilapia.

Type of Production Systems				
Enterprise	Pond	Raceway	Tanks	Closed Recirculation
Catfish	88%	3%	3%	3%
Trout	27%	55%	18%	
Hybrid-Striped Bass		50%	50%	
Tilapia	13%	25%	25%	38%
Freshwater Shrimp Nurseries				100%
Baitfish	50%	13%	25%	13%
Ornamental Fish	60%		20%	20%
Sport/Game Fish	100%			
Other	64%	9%	18%	9%

Sales direct to consumers, live haulers or through fee fishing were the most frequently used market outlets.

Market Outlets	
Direct to Consumers	25%
Live Hauler	20%
Fee Fishing	19%
Wholesaler	11%
Restaurant	8%
Other	7%
Bait Dealers	5%
Processor	3%
Grocery Store / Supermarket	2%

A majority of Tennessee aquaculture producers describe their attitude about the future of aquaculture as optimistic.



The average amount of feed purchased in a year was 23,467 pounds and the total amount of feed used for Tennessee's aquaculture industry is estimated at approximately 500 tons.

Use of Certain Feed Sources	
Source of Feed	Percent
Local Feed Store	63
Out-of-State Feed Company	17
"Fish Feed" Company	12
Local Feed Mill	5
Other	3

The most common sources of information used by those actively involved in aquaculture in Tennessee were The University of Tennessee Agricultural Extension Service, other fish farmers and other states' Extension services.

Use of Information Sources by Those Active in Tennessee Aquaculture	
Information Source	% of Responses
The University of Tennessee Agricultural Extension Service	16.6
Other Fish Farmers/Aquaculturists	14.6
Other States' Extension Services	12.1
Trade Magazines	10.8
"Other"	10.2
Web Sites (Internet)	7.6
Tennessee Aquaculture Association	7.0
Tennessee Department of Agriculture	6.4
United States Department of Agriculture	5.1
Neighbors	3.8
Trade Newspapers	3.8
Southern Regional Aquaculture Center	3.8

Grower educational programs was rated as the greatest need for Tennessee aquaculture producers and was followed closely by a need for consumer awareness programs, technical support, access to funding and cooperatives.



## Executive Summary

A joint project of the Tennessee Aquaculture Task Force and the Agricultural Development Center, funded by the Tennessee Department of Agriculture's "Ag Development Fund," was conducted during the summer of 2000 to assess the size, scope, inventory, situation and market capacity of Tennessee's existing aquaculture industry. A survey questionnaire was developed by a sub-group of the Aquaculture Task Force and included questions to assess production and marketing tactics as well as attitudes regarding opportunities for the development of aquaculture in Tennessee.

According to the results of the survey, very little concentration is evident for any particular aquaculture enterprise or in any single region of the state. Tennessee's aquaculture industry is comprised primarily of operators who consider their aquaculture activities as part-time operations.

The respondents to the survey represent approximately \$3.5 million in annual gross aquaculture sales primarily from catfish, tilapia, baitfish and trout operations. A majority of operators sell either direct to consumers or to live haulers. Tennessee's aquaculture industry uses approximately 500 tons of feed annually. Tennessee's aquaculture producers are primarily optimistic about the future of aquaculture in Tennessee and most of those who are pessimistic are planning to leave the industry in the next one to 5 years.

Most aquaculture producers get information to assist in managing their operations from The University of Tennessee Agricultural Extension Service, from other fish farmers or from another states' Extension services. However, the greatest need for Tennessee's aquaculture industry was identified as grower education programs followed by a need for consumer awareness programs, technical production support and access to funding. The most often mentioned constraints facing aquaculture operators in Tennessee are labor, volume of products and the lack of a processor.

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# Opportunities for Growth: An Assessment of Tennessee's Aquaculture Production

*A joint project by the Tennessee Aquaculture Task Force and The University of Tennessee, Agricultural Development Center*



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