Costs of Regulations on Baitfish/Sportfish Farms: What Will it be for Trout?

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Current state of U.S. aquaculture

GROWTH RATE (%)

YEAR


SOURCE: FAO (2016)

United States  World
Justification

• We were approached by individuals working to streamline regulations asking for data on compliance costs

• Need to **capture and publicize** the magnitude of regulatory costs
Baitfish/Sportfish Survey: Regulatory Costs

- Alabama
- Arkansas
- Florida
- Illinois
- Kansas
- Louisiana
- New York
- North Carolina
- Ohio
- Pennsylvania
- Texas
- Virginia
- Wisconsin

74% of U.S. production
Types of Results

- Farm Characteristics
- Number of Regulations and Renewals
- Average Regulatory Costs
- Regulatory Cost Breakdown
- Regulatory Cost and Farm Size
- Cost by Regulatory Category
### The Cost of Regulations

#### Number of Regulations and Renewals

<table>
<thead>
<tr>
<th>State / Grouping</th>
<th>Total number of regulations identified</th>
<th>Average number of state permits/licenses</th>
<th>Average number of federal permits/licenses</th>
<th>Average renewal frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Arkansas</td>
<td>305</td>
<td>9</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>New York</td>
<td>22</td>
<td>3</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>North Carolina</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Ohio</td>
<td>45</td>
<td>3</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>24</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>43</td>
<td>10</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Other National</td>
<td>498</td>
<td>6</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Large farms (&gt;202 ha)</td>
<td>251</td>
<td>11</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Medium farm (202 ha to 20 ha)</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Small farms (&lt;20 ha)</td>
<td>144</td>
<td>4</td>
<td>0</td>
<td>17</td>
</tr>
</tbody>
</table>

**498 Regulations**

**79% State**

**13 Renewals/Year**

As many as 203/farm
# The Cost of Regulations

## Average Regulatory Cost per Farm

<table>
<thead>
<tr>
<th>State</th>
<th>Average regulatory cost per farm</th>
<th>Average regulatory cost per acre</th>
<th>Estimated regulatory cost per state</th>
<th>Regulatory cost as percent of total (production + marketing) costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>$30,716</td>
<td>$449</td>
<td>$184,306</td>
<td>7%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>$260,171</td>
<td>$418</td>
<td>$7,284,781</td>
<td>18%</td>
</tr>
<tr>
<td>New York</td>
<td>$28,948</td>
<td>$2,253</td>
<td>$239,586</td>
<td>61%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>$57,425</td>
<td>$1,618</td>
<td>$1,700,916</td>
<td>52%</td>
</tr>
<tr>
<td>Ohio</td>
<td>$40,966</td>
<td>$7,096</td>
<td>$1,474,569</td>
<td>23%</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>$35,741</td>
<td>$6,192</td>
<td>$679,075</td>
<td>40%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>$379,629</td>
<td>$13,942</td>
<td>$2,657,401</td>
<td>37%</td>
</tr>
<tr>
<td>Other states</td>
<td>$63,558</td>
<td>$2,418</td>
<td>$1,542,342</td>
<td>12%</td>
</tr>
<tr>
<td>National</td>
<td>$148,554</td>
<td>$2,953</td>
<td>$12,027,128</td>
<td>25%</td>
</tr>
</tbody>
</table>

**Total Estimated Regulatory Cost:** $12,027,128 (25% of total production + marketing costs)
25% of Total Costs & prevent expansion to benefit from economies of scale.

How Much is Due to Regulations?
Estimated Annual Regulatory Cost to the Baitfish/Sportfish Industry

$12.1 million per year

Adjusted by Volume of Production
What types of costs due regulations create?

- Direct Cost = 1%
- Indirect Cost = 99%

- Permits & Licenses
- Changes due to Regulations
- Fish Health
- Manpower
- Foregone Sales
Average Cost Per Farm by Farm Size

- Small Farms
- Medium Farms
- Large Farms
Average cost of regulations per acre by farm size
Cost by Regulatory Category

Environmental Management: 61%

Legal and Labor Standards: 14%

Interstate Transport: 4%

Fish Health: 20%

Culture of Commercially Harvested Species: 1%

Greatest number of regulations!
Is a Study Like This Useful?

Example:

- For baitfish/sportfish industry, fish health regulations are frustrating and costly.
- Economic Effect of a Voluntary Uniform CAHPS Program
  - 8 Scenarios developed to model potential changes and effects
  - Study results pointed to opportunities to reduce costs.
CAHPS Program & Baitfish/Sportfish: Net Benefit Scenario

Reduction in Cost
$148,000/farm to $66,000/farm
Is a Study Like This Useful?

Example:

• Results being presented widely, especially in venues w/regulators of import to baitfish/sportfish farms.

• Comments heard from regulators to date:
  - “I had no idea it was costing that much...”
  - “I didn’t know it was taking up so much of their time...”
  - “No wonder they are unhappy with us....”
Trout Farming Costs:

How Much is Due to Regulations?

We are working to find out.
The Economic Impact of Regulations on Shellfish and Trout Aquaculture Growth in the Western United States

Carole Engle, Gary Fornshell, Fred Conte, Bill Hanshumaker, Bobbi Hudson, Jonathan van Senten, Michael Schwarz

Industry Advisor: Bill Dewey
Objectives:

1. Develop detailed information on regulations for which trout growers must comply;
2. Estimate total costs of regulations faced by trout farmers;
3. Disseminate project results broadly to industry associations and aquaculture research & extension specialists for use in discussions with policy makers.
~99% of value of trout sold nationally & 
~87% of the farms nationally
Now a national survey for trout.

**WRAC**
- California
- Colorado
- Idaho
- Oregon
- Utah
- Washington

**APHIS**
- Missouri
- Nebraska
- North Carolina
- Pennsylvania
- West Virginia
- Wisconsin

**USTFA**
- Georgia
- Michigan
- New York
- Ohio
- Virginia
Deliverable Outputs:

- Final reports
- Fact sheets
  - National
  - Western-region trout
  - Individual states (where enough observations for confidentiality)
- At least 1 refereed article
- Ms submitted to Fisheries
- PowerPoint presentations
- Webinar(s)
A special thank you to all of the producers who participated for their time and for trusting us to maintain the confidentiality of their data.
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