

impact

University of Idaho Extension programs that are making a difference in Idaho.

Economic impact of regulations on the trout industry

AT A GLANCE

University of Idaho Extension collaborated with farmers and researchers nationally to quantify the economic impact of regulations on the trout industry.

The Situation

The regulatory environment in the United States has become ever more stifling for growth and development of aquaculture. While regulations are developed in response to desires to improve quality of life and safety of U.S. citizens, the suite of regulations that affect U.S. aquaculture often overlap, trigger other permitting requirements, and frequently result in a lengthy and convoluted chain of approvals. There is growing concern that the regulatory framework has contributed to declines in several sectors of U.S. aquaculture and preventing growth of others. Nationally, the Western Region produces 67 percent of all trout sales. More specifically, the Western Region includes the top three trout-producing states (Idaho #1, Washington #2, California #3), in terms of dollar value of sales. From 1998 to 2013, Idaho experienced a 27 percent reduction in the number of trout farms.

Determining the impact of regulations on aquaculture enterprises will clarify whether regulations constitute a significant economic impact on U.S. aquaculture and may offer some insight into the role regulations play, if any, in the decline of U.S. aquaculture.



Idaho is the largest trout-producing state with substantially greater average size of farms with high volumes of production.

Our Response

The UI Extension educator in Twin Falls County collaborated with researchers and trout farmers in obtaining USDA-NIFA funding through the Western Regional Aquaculture Center to quantify the regulatory cost for trout farms in the Western U.S. Subsequently, the U.S. Trout Farmers Association and USDA-APHIS contributed funding for the study. A national survey was conducted of trout and salmon farms in the 17 top producing states to measure on-farm regulatory costs and to identify which regulations were the most costly. The response rate was 63 percent with a coverage rate of 94 percent of the U.S. production of salmonids.

Program Outcomes

Study results showed that the regulatory cost burden on the U.S. trout industry has increased farm costs substantially and regulatory actions resulted in lost revenues (Table 1). Costs on Idaho trout farms are substantially more per farm, but at a lower cost per pound of fish. Idaho is the largest trout-producing state with substantially greater average size of farms with high volumes of production. Regulatory costs functioned primarily as fixed costs constraining the industry's ability to increase supply production to meet strong market demand, which is being met by increasing trout imports. About half of the U.S. supply of trout products is from imports.

The majority of the increased regulatory costs are direct costs that included testing for fish health certificates and effluent discharges (68 percent), increased manpower (23 percent), farm-level changes (7 percent), while permits constituted only 2 percent of the regulatory cost burden. The other major economic finding from the study is lost revenue from lost markets, reduced production capacity and thwarted expansion from regulatory actions. Smaller-scaled farms were negatively affected to a disproportionately greater degree than larger farms.

The detailed farm-level data from this study offers insight into how the regulatory burden affects aquaculture farming businesses. More importantly, project results suggest various ways that regulatory agencies can reduce the overall regulatory cost burden, while maintaining adequate oversight.

The National Aquaculture Association used project results to request EPA consider reducing testing frequency for effluent discharge. As a result, EPA is analyzing their permitting and sampling requirements. The National Aquaculture Association also used project results for their annual Walk-on-the-Hill with congressional members and staffers.

FOR MORE INFORMATION

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Deliverables from the project include 15 Extension fact sheets, 15 infographics, video and published research paper; all posted on [USDA's Western Regional Aquaculture Center webpage](#).

Project personnel have offered 30 presentations to various aquaculture associations, government agencies, researchers and Extension specialists.

Table 1. Summary of national and Idaho study results

Regulatory Burden	National	Idaho
Total on-farm regulatory costs	\$16.1 million/year	\$7 million/year
Per farm average regulatory cost	\$150,506/farm	\$538,135/farm
Average regulatory cost per pound of production*	\$1.23/pound	\$0.21/pound
Percent regulatory cost of total farm costs	12%	7%
Percent lost revenue sales of total costs	28%	46%

*Averaged by farm.

The Future

Quantifying regulatory impacts provides a basis for changes that would streamline regulatory processes to reduce the on-farm regulatory burden and promote growth and development of sustainable U.S. aquaculture in accordance with the goals of the 1980 National Aquaculture Act.

Cooperators and Co-Sponsors

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