

Impacts of COVID-19 on U.S. sportfish farms: Quarter 1 Results

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Introduction

On March 23rd, 2020 Virginia Tech Seafood AREC and The Ohio State University Extension initiated an online survey of the U.S. aquaculture, aquaponics, and allied businesses. This survey was designed to capture and quantify the effects of the coronavirus disease (COVID-19) on the aquaculture, aquaponics, and allied industries. The survey closed April 10th, 2020 at 11:59 pm. The survey will be distributed at the conclusion of every quarter for 2020, to attempt to capture the evolving impacts of COVID-19 over time.

Survey methods are detailed in the Virginia Cooperative Extension Fact Sheet VCE-AAEC-218, available at: https://www.arec.vaes.vt.edu/arec/virginia-seafood/research/Impacts_of_COVID19.html. This report is a supplemental report to the overall survey that summarizes results of **sportfish farm** respondents.

Results

Characterization of Sportfish Respondents

Quarter 1 survey results showed that there were **25 sportfish farm participants**. Fifty-two percent of sportfish respondents sold their fish directly to customers, 24% sold to other, un-categorized channels, 16% to other aquaculture farms, 4% to distributors, and 4% to restaurants (Table 1). No respondents sold to processors or grocery stores/supermarkets.

Table 1. Primary marketing channel for sportfish respondents.

Category	Percentage
Direct to customers	52%
Other	24%
Other aquaculture farms	16%
Restaurants	4%
Distributors	4%
Processor	0%
Grocery stores/supermarkets	0%

Sportfish farms vary in terms of their production scale. Respondents to the survey included those with scales of production from sales of \$10,001 to \$25,000 a year up to those with annual sales greater than \$1 million (Table 2). The greatest percentage (32%) of respondents had sales greater

than \$1 million, followed by \$250,001 to \$500,000 (16%); \$100,001 to \$250,000 (12%); \$50,001 to \$100,000 (8%); \$25,001 to \$50,000 (8%), and \$10,001 to \$25,000 (4%). No respondents had sales less than \$10,001 or from \$500,000 to \$1 million. Twenty percent did not respond to this question.

Table 2. Scale of sportfish respondent farms/businesses.

Category	Percentage
> \$1 million	32%
No response	20%
\$250,001 - \$500,000	16%
\$100,001 - \$250,000	12%
\$50,001 - \$100,000	8%
\$25,001 - \$50,000	8%
\$10,001 - \$25,000	4%
\$5,001 - \$10,000	0%
\$1,001 - \$5,000	0%
\$1 - \$1,000	0%
\$500,000 - \$1 million	0%

The greatest percentage of sportfish farm respondents (56%) were located in the North Central Aquaculture Region, followed by the Western Aquaculture Region (24%), and the Northeastern Aquaculture Region (20%) (Table 3). There were no sportfish respondents from the Southern or Tropical and Sub-tropical Aquaculture Regions.

Table 3. Participation by aquaculture region.

Category	Percentage
North Central Aquaculture Region	56%
Western Aquaculture Region	24%
Northeastern Aquaculture Region	20%
Southern Aquaculture Region	0%
Tropical and Sub-tropical Aquaculture Region	0%

Key Findings

Eighty-eight percent of sportfish respondents reported that their farm or business had been impacted by the COVID-19 pandemic. One respondent indicated that their farm had not been affected by COVID-19 because they only sell and deliver fish to another farm in the winter months. When asked whether their farm or business would survive the next 3 months without external intervention (such as government assistance), 63% said, “yes.” Twenty-nine percent reported that their farm would “maybe” survive 3 months without external assistance, and 8% said that their farm or business would not survive 3 months without external assistance. When asked the same question, but for the next 6 months, 46% said that it would survive, 46% said “maybe,” and 8% said that their farm/business would not survive the next 6 months without external assistance. Responses related to 12 months without external assistance were that 25%

indicated that they would not survive, 42% said that their farm or business would “maybe” survive, and only 33% said that they would survive. Those that indicated that they would be able to withstand more than 10 months without sales included two respondents who operated state hatcheries.

Lost Sales

Seventy-five percent of sportfish farm respondents indicated that they had lost sales due to the COVID-19 outbreak. In addition, 10% of sportfish respondents indicated that they had lost sales to international or export markets outside the U.S. In terms of the volume of sales that had been lost, 30% reported losses in the range of \$50,001 to \$100,000. An additional 10% of respondents reported that they had lost either \$100,001 to \$250,000, \$10,001 to \$25,000, or \$5,001 to \$10,000. Five percent of respondents reported sales losses of either \$25,001 to \$50,000, \$1,001 to \$5,000, or \$1 to \$1,000. No respondents reported losses greater than \$250,000. Twenty percent of respondents indicated that they could not estimate the losses at the time the survey was administered.

The lost sales reported included canceled contracts of various sorts. Seventy-three percent of sportfish respondents reported losing private contracts for sales, and 14% reported losing government (state or federal) contracts for sales.

Respondents were further asked what challenges they expected to experience on their farms or businesses as a result of the coronavirus pandemic in 2020. Seventy-nine percent of sportfish respondents indicated that they expected to lose sales, with 11% expecting to lose international markets. In terms of the volume of sales expected to be lost, 26% expected to lose from \$100,001 to \$250,000, 16% each expected to lose from \$50,001 to \$100,000, or from \$5,001 to \$10,000, 11% expected to lose from \$10,001 to \$25,000, and 5% expected to lose from \$1,001 to \$5,000. Twenty-six percent indicated that they could not estimate the amount of losses at the time of the survey.

When asked how long sportfish respondents thought their farm or business could survive without sales before suffering longer term cash flow effects, 25% said 1 to 3 months, 21% said more than 10 months, 17% said 7 to 10 months, 13% 4 to 6 months, and 8% said less than 1 month. Seventeen percent did not respond. It should be noted that some respondents completed the survey four weeks prior to the preparation of this report.

Labor

Thirty-two percent of respondents reported that they had laid off employees as a result of the COVID-19 pandemic and another 14% indicated that they “will have to soon.” Fifty-five percent had not laid off employees. In terms of the number of employees laid off, 71% of sportfish respondents who had laid off employees indicated that they had laid off 1 to 3 employees. Another 14% had laid off from 4 to 6 employees and from 16 to 20 employees, respectively.

Respondents were further asked how many weeks it would be before they would have to lay off employees. Sixty-seven percent of sportfish respondents indicated that they would have to decide within 4 to 6 weeks whether to lay off employees and 33% said 1 to 3 weeks. It should be noted that data collection for the survey was open for a period of 3 weeks. Sportfish respondents were

further asked how many employees they would need to lay off at that time. Two-thirds (67%) said that they would have to lay off from 1 to 3 employees and one-third (33%) said 7 to 10 employees. Of those employees who had been laid off, 60% of sportfish respondents indicated that these were “Short-Time” or “Shared-Work” employees. Ten percent did not respond to this question.

Fifty-four percent of sportfish respondents had experienced some type of labor challenge. Forty-one percent of sportfish respondents indicated that employees had missed work due to COVID-19, while 59% reported that employees had not missed work due to the coronavirus. Employees who missed work did so because they or a family member was sick or due to self-quarantine. Another respondent reported isolating employees on farms that, as a consequence, limited the amount of work that could be done. Other respondents reported that employees at their fee fishing facilities were afraid to come to work for fear of being exposed to the disease. Of those respondents who reported employees missing work, 44% reported 11 to 14 days, 33% 7 to 10 days, and 11% 1 to 3 days and 4 to 6 days.

In addition to employees missing work, other respondents commented that they had to put hiring of seasonal labor on hold. Another respondent reported insufficient staffing to do what needed to be done and having to deal with actions that may potentially imperil fish health and survival.

Respondents expected the labor challenges related to employees missing work and the inability to hire seasonal employees to continue. Planning for upcoming staffing needs is difficult with the length of the shutdowns. One respondent indicated that training new delivery drivers will be a challenge while trying to maintain “social distancing”. Since they typically have multiple drivers using the same vehicles, maintaining disinfection of the interior of vehicles will require additional labor.

Challenges to the Farm or Business

Sportfish respondents reported a variety of different challenges to the business that included production challenges not related to labor, increased costs, the cascading effects of holding market-ready product for extended periods of time, lower farm-gate prices, and financial services. Sixty-three percent of sportfish respondents expected to experience production challenges not related to labor.

Thirty-eight percent of sportfish respondents reported increased costs of production, including feed, and 58% expected to experience increased costs of production in the coming months. Feed costs were reported to have increased as a result of higher inventories that have resulted from reduced sales. Holding fish for longer periods of time will result in decreased growth from overcrowding and increased risks of oxygen depletion with greater biomasses of fish. Another respondent reported that labor costs per unit of production have increased because they continue to pay salaries of those not on the farm but yet do not have a full work force. Trucking costs were reported to have increased. Another respondent reported that maintaining social distance, washing hands, and disinfecting common areas takes more time and costs much more, resulting in reduced efficiency.

Thirty-eight percent of respondents indicated that they could hold market-ready product for 1 to 3 months, with 25% reporting 4 to 6 months, 21% less than 1 month, and 17% more than 10 months. Holding market-ready product clearly increases biomasses of fish, reduces growth, increases costs, and increases risk of greater mortality to disease.

Challenges related to production inputs (feed, therapeutants, etc.) were reported by 46% of sportfish respondents. Sportfish respondents reported difficulties with obtaining feed and getting feed on time due to shipping and distribution difficulties. Another respondent reported canceling feed orders in response to an inability to obtain eggs, fry, or fingerlings following cancellations from hatcheries. Another respondent reported that feed costs will increase due to having to hold a large amount of fish for a longer period of time due to losses of sales. Broodstock cancellations were reported by one respondent. Another respondent reported having ordered supplies prior to COVID-19 that will have to be held for the 2021 season. One respondent reported a lack of availability of some production inputs that were to come from other countries.

Thirty-one percent of sportfish respondents reported challenges with repair, construction, consultant, or engineering services. Sportfish respondents reported that construction projects have either stopped or slowed down. Others reported that either closure or reduced hours of businesses that do repairs have prevented them from having repairs done. Other respondents reported that in-house staff were being directed towards deferred maintenance projects. Other comments were related to having to put all repair and construction projects on hold and limitations on availability of cash for discretionary projects and repairs. Another respondent mentioned that the shutdown happened when they were near the end of renovating their restaurant and building a hatchery this year.

Financial services challenges were mentioned by 8% of respondents. One respondent reported that obtaining additional funds was not an option.

In terms of expectations for the coming months, 79% of sportfish respondents expected additional lost sales, 63% continued production challenges, 58% increased costs of production, 54% labor challenges, and only 8% expected increased demand for products. Additional comments from sportfish respondents included concern over steady feed supplies, greater difficulties to obtain production items on time.

Marketing of Products

Extended holding of product that is ready to be sold can cause problems associated with planting new crops for subsequent years. Thirty-three percent of sportfish respondents indicated that holding market-sized product would make it less marketable. More specifically, 63% of sportfish respondents said that holding product would reduce the quantity of sportfish sold and 13% said that it would reduce the price received. One respondent indicated that they sell 35% to 50% of their crop to live fish markets which were shut down at the time of the survey. The other 50% to 65% go to private pond stocking, whose owners now are scared to spend extra money to stock ponds. Other comments were related to the holdover inventory that takes room away for growing the next crop of fish and that they will not be able to sell their fish until the summer of 2021. Others mentioned that they cannot hold their fish stocks indefinitely because the collective biomass will exceed the carrying capacity.

For coldwater fish such as market-ready trout that must be held, the waters will get too warm in the coming months. Other effects of holding market-ready product include the cash flow effects, increased costs, long-term reduction in production, interrupted flow of hatchery fingerlings to market size, and missing the seasonal hatching season. Other comments related to reduced prices from fish growing larger than what their customers want.

Increased Demand for Products

No sportfish respondents reported any increased demand for their products. While 8% reported expecting future increases in demand for their products, those respondents were not able to estimate the amount of sales expected to be lost.

Assistance to Farms/Businesses

The survey included questions on the types of assistance that might be helpful to the farm or business of respondents. Fifty percent of sportfish respondents indicated that federal assistance would increase the likelihood of survival of their farm or business. Another 29% said that assistance from the state, 17% from local government, and 13% from associations would be helpful.

When asked more specifically what types of assistance would be helpful, 33% said waiving or delaying state fees, 25% said that loan guarantees, 17% said specialty crop insurance, and 13% said that assistance with identifying new markets or tariff relief would be helpful. No respondents indicated that there were existing programs for which their sportfish farm did not qualify.

Additional comments by sportfish respondents included a variety of suggestions on the type of assistance that would be of greatest help (Table 4). The most frequently mentioned type of assistance (36%) mentioned by sportfish respondents was the need for very immediate assistance in the form of cash payments or grants. This was followed by tax breaks (32%), financing assistance, with mention of low-interest loans and debt forgiveness, reducing the regulatory burden (24%), marketing and distribution assistance (16%), stopping imports of low-priced fish (8%), employee assistance (8%), and government purchases of fish (8%). Twenty percent of respondents mentioned other types of assistance that included help with importing eggs, encouraging people to go fishing, strengthen the economy, and flattening the economic curve. Several respondents expressed appreciation to associations that were keeping farmers informed. Another suggestion was for a communications hub that would include assistance programs, research, lifting red tape, and legislative input for assistance programs.

Table 4. Additional comments related to types of assistance reported by sportfish respondents that would be most useful.

Type of assistance	Sportfish respondents (%)
Cash payments, grants, credits, for expenses	36%
Tax breaks	32%
Financing assistance (guaranteed loans, debt forgiveness, deferred loan payments, exemption of interest, low-interest loans)	24%

Reducing regulatory burden	24%
Marketing and distribution assistance	16%
Stop importing non-competitively priced fish	8%
Employee assistance	8%
Government purchases of sportfish	8%
Other	20%

Discussion and Conclusion

Responses by sportfish farms to the Quarter 1 survey show that the U.S. sportfish farmers have been impacted severely by the COVID-19 pandemic. Seventy-three percent of sportfish respondents had had sales orders from private companies canceled and 14% had had government (state/federal) orders canceled. While lost sales were the immediate impact, other challenges were mentioned related to increasing production costs, financing, and other essential services that are critical to survival of the farm or business. Effects on the sportfish industry will be felt more in the coming months if sales continue to be reduced, with 25% indicating that they would not survive if the sales losses continue over the next 12 months. Given that survey results showed that there will be longer-term effects on the U.S. sportfish industry, it will be important to continue to monitor changes throughout the year.

Key findings from sportfish farm respondents include:

- 88% have been impacted by COVID-19
- 73% have had orders/contracts canceled
- 46% have or will soon have to lay off employees
- 75% have experienced lost sales
- 63% can survive 3 months without external intervention