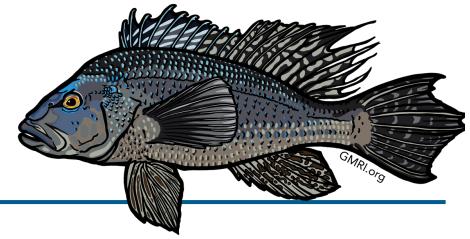


Measuring Quality: Black Sea Bass Handling



Experimental Design

Vessel 1:

- Gear: Pot
- Duration: 1 day

Vessel 2:

- Gear: Pot
- Duration: 1-2 days

Vessel 3:

- Gear: Rod and Reel
- Duration: 1-2 days

Pot Gear Vessels:

- Bled a small number of fish and kept the rest whole.
- Fish were stored in either standard ice or slurry ice.
- The quality of all fish were measured using the CQR and QIM methods at the processor after landing.

Rod and Reel Vessel:

- Measured the quality of fish on deck immediately after capture, with a goal of establishing what the high end of the quality range is for black sea bass.

Total Fish Measured: 360 fish were measured across 4 trips/vessel, 30 fish/trip (~ 720 pounds)



Methods of Measuring Quality

Certified Quality Reader (CQR):

Hand held device that runs a small electrical current through fish tissue to measure resistance and signs of good/bad quality; higher numbers indicate higher quality.

Quality Index Method (QIM):

Visual/physical assessment of fish characteristic categories (e.g. color, firmness, smell, etc), based on a demerit point system. A lower total number indicates higher quality. Characteristics and possible points vary for different species.

Temperature data:

Digital loggers were used to record the temperature profile experienced by the fish on the vessels through offload.



Takeaways

- It's important to monitor the temperature of fish in a slurry or on ice. Variation and increases in temperature can lead to decreased quality.
- The smaller fish (compared to other species) and shorter trips in this fishery might make ice types less critical. While there was a slight increase in quality when using slurry ice, the fish on standard ice still measured as decent quality.
- Bleeding has potential to increase quality through extending shelf -life, but improvements may not be detectable in shorter time periods, which is perhaps why the data showed only a slight increase in quality for bled fish.



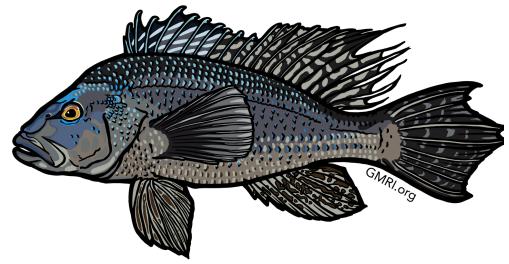
For more details on this experiment with this species and results on quality experiments with a range of other species, visit gmri.org/quality.





Key Results

- Average CQR score immediately after capture was 21 across all vessels, indicating decent quality. Average score after landing was 17, indicating a slight decrease in quality.
- Average QIM score immediately after capture across all vessels was 0, which is the best possible score, indicating very high quality. The average score after landing was 2.7, indicating a slight decrease in quality.
- Colder storage temperatures on deck lead to higher quality fish.
- Use of bleeding and slurry ice each showed slight quality increases compared to using ice and keeping fish whole.



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