

Product Quality and Lobster Handling : The Power is in Your Hands

With the talk of bait shortages, the enforcement of difficult restrictions on fishing gear to protect the endangered North Atlantic right whale, and debilitating disabilities that become an occupational hazard, there is a desperate need for relief to lobstermen. Whether that relief comes in the form of economic growth to stimulate the industry, financial subsidies to cover the cost of expensive, mandated equipment or new lobster processing technologies to speed production, one thing is sure: good news is on the horizon.

According to Dr. Jean Lavelle, a lobster veterinarian from Prince Edward Island and Clinical Scientist at the Atlantic Veterinary College (AVC) Lobster Science center, certain small changes in lobster handling can result in much larger returns.

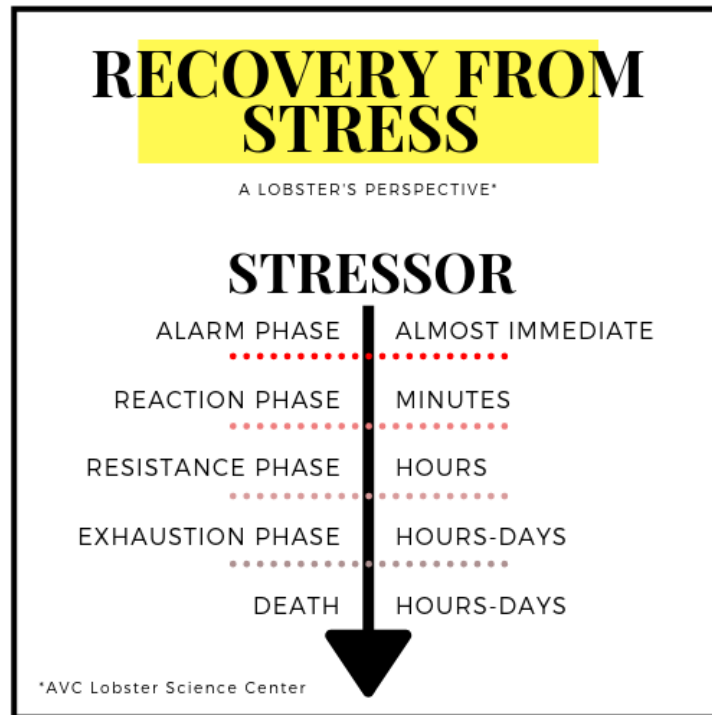
As fishermen know, the highest prices are offered for lobsters which are considered the highest quality. Any lobster with a hard shell, high survival rate, high meat yield, and good “ship-ability” will be purchased for top dollar at market. That’s because those qualities result in a product for the consumer with a desirable taste and texture, which is why lobsters falling into that category are in higher demand. For this reason, it is to the financial benefit of the fisherman to pay special attention to anything that will increase that quality.

There are numerous factors which affect quality leading up to the point when the lobster reaches the boat for processing. Anything from the stage of the Molt Cycle to blood protein level are a factor, but these are all factors which are completely out of the control of the lobsterman. Once it reaches the boat, the level of quality of the lobster at that very

moment can only be maintained or lost. It is at that point that the actions of the handler begin to increase returns or decrease profits.

Dr. Lavalle has spent a great deal of time speaking to various members within the lobster fishing industry in the U.S. and Canada about the impact of stress on lobster quality. “Every time someone touches a lobster, a little bit of quality comes out of it,” he said. “As soon as they come out of water, their gills collapse and they won’t be able to breathe as well.” One thing in particular that makes stress so difficult on a lobster is that once it becomes stressed, it has a much harder time calming down. As the lobster is being handled during the various steps of processing, that stress continues to grow and grow until it reaches the point of no return – meaning death for the lobster.

Therefore, not only is it important to handle lobsters in a way that prevents injury (an obvious detriment to the overall quality), but it is also important to decrease the amount and length of time they are handled at all. It’s also important to ensure that the lobster is handled with care, keeping its level of stress in mind at all times. Even if the lobster reaches the boat with a softer shell, if the handler takes extra care during processing, that lobster will make it to market.



Lobster react negatively to each touch point during processing, but each of these touch points can actually become an opportunity to maximize quality. The examples of improvements to each crucial touch point, found below, are from the USDA Trade Adjustment Assistance For the Northeast US Lobster Industry's Intensive Training program (Morse):

1. At trap set up, and at the rail, the traps should be hauled in as slowly as practical, and brought over the rail smoothly, leaving space between the bottom of the trap and the gunwale. Placing a rope around the trap base will keep the trap off the gunwale and a small mesh floor will keep the claws and walking legs inside.
2. When clearing the trap, handle the lobster delicately – avoid squeezing. Gently lay the lobsters out individually on the banding table, in separate troughs when

- possible. A soft base, such as seaweed or rubber will avoid banging. Do not toss them.
3. On the banding table, it is important to get the lobsters back into the water as soon as possible. Band them gently and keep the lobster right side up.
 4. In the live tanks, carefully place them inside – do not toss. Keep them in storage tanks whenever possible, as lobsters stored in crates lose about 2-5% of their weight in drip loss in an hour. If it's absolutely necessary to use tanks, keep shaded with a good supply of water on them. Tanks should have good water flow. "Dead spots" can be corrected by placing a manifold on the bottom of the tank to distribute water and air. The deeper the water pump inlet can be, the better, to get down to cooler, saltier water. Trays or boxes inside the live tanks keeps the lobsters from getting crushed while also increasing the water flow.
 5. From tank to the crate, do not toss lobsters. Retrieve one lobster per hand at a time. Keep spines aligned to minimize damage. Crates or shelves separate lobsters in the holding tank, and unload faster. Watch the wharf crew and ensure that they handle the crates with the same care.
 6. On to the truck, the truck crew should handle carefully – lifting crates horizontally, with both handles. The trucks should use both ice and refrigeration.

According to the published study titled "Effects of handling or injury disturbance on total hemocyte counts in western rock lobster" mishandling (specifically tossing) lobsters will make them 3 times more likely to arrive weak at processing plants than those which were

handled using the steps above. Minimizing damage to the lobsters landed will maximize the value of the product. A captain that is known for taking such extensive measures throughout the entire process will be known as the captain with the highest quality yields. Taking extra measures such as branding lobsters with bands containing traceability information helps the buyers and salesmen recognize (and seek out) the best operators.

“Quality is everything, just take a look at the difference between Poland Spring Water and tap water, or Coca-Cola vs. generic soda. The consumer perceives higher quality with the branded item.”

- **John Jordan, Calendar Islands Maine Lobster**

To conclude, there is no shortage of research within the Aquaculture industry to prove that lobsterman have the power to make changes in their processing which, at the end of the day, will result in higher prices for their yields. Considering the number of outside factors that take a toll on a fisherman’s profits, it is certainly good news to hear that some of the power is back in their own hands.

Works Cited

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