LOUISIANA Fisheries Forward fast facts
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Basics of Soft Shell Shedding

SOFT SHELL BLUE CRAB (*Callinectes sapidus*) aquaculture is one of the oldest domestic aquaculture industries in the United States, with shedding facilities across the East and Gulf of Mexico coasts. Shedding crabs in Louisiana dates back to approximately 1887!

Soft shell blue crabs are a high value seafood, produced by culturing pre-molt crabs in shallow dockside or land-based facilities until they shed their hard shell. Also known as peelers or busters, a soft shell crab is produced by taking advantage of a crab's lifecycle. To grow larger, crabs must molt or shed their old shell.

Soft shell production is most successful when peelers are harvested one to three days before molting (red liner crab). Based on a color change starting on the edge of the back fin (see below), crab fishermen and shedders can tell how close a crab is to molting. Peelers are then held in tanks at a shedding facility until they molt.

To shed the old shell, a crab swells with water, and busts the old shell along the back edge. The crab then wiggles out through the back. The new shell has already formed and is about a third larger, but it is still soft. The crab will remain truly soft for only a couple of hours in the water. If removed, the hardening stops, so shedders must remove soft shell crabs quickly and at all hours of the day.

The soft crab is then refrigerated or frozen and sold for more than four to five times the price of a hard shell crab. Crabs molt every few days when they first hatch out of eggs to a couple of times a year as they near maturity; as a mature adult, female blue crabs reach a terminal molt and will not shed their shells again.

Traditionally, shedding started with boxes, called cars or floats, anchored off of docks or in flow-through trays on the deck of boats. For accessibility and more control, shedding facilities moved to land-based open (flow-through) or closed (recirculating) systems. However, even land-based open systems are susceptible to poor water quality, fluctuating temperatures, and damage from storms due to their required proximity to the coast. Closed systems within a garage or small shed, with some level of temperature control, offer the most control and resiliency.

What do those colors mean? The color change is due to the formation of the new shell under the old shell. The bottom second segment of the swimming fin is the easiest place to see the color change—from white to pink to red.

- **Green buster:** just beginning to show some signs of molting, but will still take a few weeks before ready to molt. These have the highest mortality rate in a system since they have to be held so long.
- **White Liner:** the first faint outline of the second shell forming underneath the old appears like a white line. The crab is still a week or two from molting.
- **Red Liner:** the line turns pink to red. Once red, the crab is only a couple days from molting. The abdomen of the crab can also turn purplish red once it gets close, especially in an immature female.

For more information on best practices for wholesale/retail dealers, and other requirements, visit: **https://www.lafisheriesforward.org/fisheries/dealers-processors/**
Learn more about recirculating soft shell crab shedding systems at: **https://vimeo.com/369914259**

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This publication is a cooperative effort of the Louisiana Department of Wildlife and Fisheries and Louisiana Sea Grant College at LSU through the Louisiana Fisheries Forward program, which aims to advance Louisiana's seafood industry. This is one of many fact sheets available free of charge at our website www.lafisheriesforward.org. // Author: J. Lively

12-2019