A year ago it was a mysterious contraption in Ron Malone's laboratory, hidden behind a hastily constructed wall and locked door to thwart prying eyes. Running water could be heard through the wall and a full-blooded Cajun might have been able to get a sniff of crawfish if he pressed his nose to the crack around the door.

Malone and his partner Dudley Culley were excited about their gizmo that automatically culled soft-shell crawfish at just the right time. The LSU professors' better soft-shell crawfish trap promised to provide propulsion to the growing, labor-intensive business of producing the soft-shell delicacies.

Since then their fortunes have taken a couple of sharp turns, the latest one coming late Friday. In recent months, when it seemed Culley, Malone and machine should be riding atop the boom of the new business with roughly 100 producers in operation and great demands for the molting crustaceans coming from out of state, their crawfish trays went dry.

The project became one of the victims of budget cuts and tight money in both research and business. Their request for a research grant was edged out. An investment plan to fund a commercial prototype fell through when it couldn't find the venture capital.

Malone cut off the water to his machine and dismantled it. Any smell of crawfish in his lab was a stale reminder of what should have been. LSU received a patent on the machine in February, which was nice, but meant little without money to develop a commercial prototype.

"It's dead in the water," Malone said in an interview just last Wednesday. In this case, he might have better described it as being stranded, high and dry.

"We proved that it works," he said. All that is left is the research needed to turn it from a small-scale, pilot project to a large-scale operation and get the final bugs out.

But he remained optimistic: As the soft-shell crawfish market grows to its $50-million-a-year potential, the industry is going to demand that the product be made available, he predicted.

Current producers are hampered by the labor-intensiveness of having to watch their vats of crawfish and hand pick those that are almost ready before their shells turn soft and they get devoured by their cannibalistic tribe. Although soft-shell production is 10 times what it was two years ago and producers are getting better than $8 a pound for their product, the soft-shell crawfish business as it now exists guarantees to "keep people poor," because of the labor involved, Malone said.

With LSU's machines, most of the labor is eliminated. Meanwhile, other states, particularly Mississippi, Texas and North Carolina, are getting involved in the soft-shell crawfish boom, and Louisiana "is about to get caught with its pants down," Malone said Wednesday.

But Friday afternoon, Malone's gloomy spirits lifted. He was notified by the National Coastal Resources and Development Institute that he and Culley had received a $140,000 grant over the next two years to develop and field test a commercial prototype of their machine.

"This has made my weekend," Malone said with a laugh. By early June, Malone expects to have his contraption back together with water running. Within two years, he plans to go from the current model that handles 25 pounds of crawfish to one that handles 500 pounds.

The LSU machine will be computer operated, requiring only a once-a-day human inspection to remove soft crawfish from the cooler and add hard ones to the system.

"This will give us a development edge on other states," he said. LSU will get royalties from sales of machines, and the industry in Louisiana will be ready for the next step in its rapid growth.

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