

PEI Grad Students Harvest A Winner

Oyster Cage Flipper Saves Time, Money

University of Prince Edward Island



Wanted for Hire: Physically strong individuals capable of lifting and turning large wire cages weighing up to 300 pounds for 10 hours a day over several months in all weather conditions.

That less-than-ideal job description is reality for the oyster farmers of Atlantic Canada. For generations, mollusk harvesting has provided their livelihood. In the 1990s it was discovered that oysters taste better when grown suspended in the water in cages. Large oyster farms now have thousands of submersible cages.

But these cages need to be flipped every 10 to 14 days, allowing the sun to kill the algae, barnacles and other parasites that attach to them and compete with the oysters for food. Oysters take three or four years to mature. A plentiful food supply over that time results in meatier oysters, which command higher prices at market.

That's what led three grad students at the University of Prince Edward Island (UPEI) to a practical, and hopefully profitable, second-year engineering project. They built a machine that attaches to a boat and does the work of two or three men by gently flipping the oyster cages.

“ Tiny Prince Edward Island accounts for nearly 30 percent of Canada’s oyster aquaculture. In 2016, the latest year for which statistics are available, the province produced a record crop of 3,672 tonnes.

Earlier cage-flipper designs used hydraulics and were too costly for farmers. Grad students Jordan Sampson, Brett McDermott and Dylan MacIsaac, all of whom grew up on PEI, took a different tack. Their machine uses the forward motion of the boat, which lowers the cost. The result, Sampson has said, is “you don’t need a guy standing in the water doing the labour-intensive work.”

The trio formed a company, Island AquaTech Inc., and got a patent with assistance from Synapse, a company that helps turn UPEI ideas into useful products and services. They received \$25,000 in startup funding from PEI’s Ignition Fund, and \$28,000 from UPEI and Springboard, a network that supports technology transfer at 19 Atlantic Canadian universities and colleges.

The company will run further tests in 2019, with commercial sales to follow. In the meantime, it’s back to grad school to finish those degrees.

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