

How do you find those oyster cages on your deep water farm? The application of side-scan technology for visualizing cages on the bottom.

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Working with cage culture on your subtidal farm can be challenging when the water depth exceeds your ability to view the structures on the bottom. Losing cages due to cut off buoy lines, placing cages on top of each other, identifying whether the cage landed right-side up or upside down, along with a number of other risks can affect your ability to manage your farm and can interfere with optimal oyster growth. Sidescan sonar is a tool that would allow farmers to visualize their cages on the bottom; however, the technology traditionally has been very expensive to install and somewhat challenging to operate. As recreational fish finder technology has advanced, the new instruments have incorporated both side-looking and down-looking sonar to their ability to detect shapes (fish or otherwise) in the water column or on the bottom. Building off a program developed by Delaware Sea Grant and the University of Delaware to detect ghost crab traps in their inland bays using commercially available fish finders, Blue Stream Shellfish explored the use of fish finders to visualize cage placement and orientation on the bottom of their deep water oyster farm. With funding from a USDA-SARE Farmer's Grant, we adapted a Humminbird Solix fish finder to be portable for movement between farm vessels and used it to visualize our bottom cage array to allow us to optimize cage management on our farm. We will showcase the adaptations made to the instrument and demonstrate its ability to visualize deep-water cages on the bottom.