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New developments from the LSU AgCenter

'Scarecrow-boats' Frighten Birds From Ponds

Throughout much of the South, birds such as cormorants and pelicans prey on young pond-raised catfish and crawfish, costing individual producers thousands of dollars in lost revenue. To try to reduce such losses, aquaculture farmers spend from \$20,000 to as much as \$100,000 a year on bird abatement programs that range from the use of noise-producing devices to poisons to shooting the birds.

Now, two LSU AgCenter agricultural engineers have developed robotic boats to keep these predators out of commercial ponds. Dr. Randy Price and Dr. Steve Hall designed these boats to be much "friendlier" than current alternatives but still get the job done.

The small boats are solar-powered and have top speeds ranging from 5 to 7 miles per hour. One model is equipped with a camera that senses motion, which, in turn, triggers a water cannon to frighten the birds. Propelled by paddlewheels, the boats have shore feelers that keep them from running aground.

The boats have been successfully tested at the LSU AgCenter Aquaculture Research Station's small research

ponds, and the prototypes are currently being tested on larger commercial ponds. The designers believe the boats can manage birds on farm ponds with little farmer labor, and they will save considerable resources over current control methods.

The researchers are investigating the use of a global positioning system linked with multiple land-roving paddlewheels in order to gain access to an adjacent pond. The proposed configuration would allow the boat to traverse small sections of land and/or dock with a power resupply station.

Future uses being considered for this device include remote measurement of water quality parameters, crop scouting, site-specific environmental monitoring for various crops, pest predation reduction applications, and possibly crop harvest. What first started out as a means to reduce the predation of catfish, the "Scarecrow-boat" may have many other useful applications that will benefit a large number of different businesses.



LSU AgCenter agricultural engineers Dr. Steve Hall, left, and Dr. Randy Price launch one of the robotic boats they are developing to assist catfish and crawfish farmers in scaring off birds that prey on fish (left). The boat uses a camera to track invading birds and a water gun to chase the bird away (right).



for information

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