

BIRD DETERRENTS

TESTING PRACTICAL BIRD DETERRENTS
FOR FLOATING OYSTER AQUACULTURE
2023 NORTHEAST SARE FARMER GRANT

WHICH METHOD WILL BE MOST EFFECTIVE AT DETECTING BIRDS FROM OYSTER CAGES?



Tactile method-using spikes on floating bags

Tactile deterrents utilize a physical obstacle that a bird will encounter upon attempting to land on floating farm gear. For our project, we have selected stainless steel bird control spikes, which consist of rigid metal wire affixed to a steel strip and zip tied to each float on a cage



Visual method-using predator model hawk kite

Visual deterrents can utilize the 'scarecrow' approach, creating a visual model (often of a predator) that would detract birds from foraging nearby. For our project, we have selected bird scaring hawk kites as a natural predator to the bird species present on area oyster farms, to be placed near the experimental floating cages.



Auditory method-using recorded sound

Auditory deterrents utilize sound, both sonic and ultrasonic, to bother and discourage foraging and roosting behavior. For our project, we have selected a sonic device that emulates distress calls from the target species as well as natural predator calls.

In 2023, we performed a study funded by Northeast SARE with Jersey Devil Oysters and Whale Point Oyster Farm with the purpose of testing 3 different bird deterrent methods during the growing season.

Oyster farms attract all sorts of marine wildlife, which love all the wonderful places to live, feed, hide and thrive. In the same way that a reef is an underwater place for many species to thrive, so are the thousands of cages used in the rearing of oysters. As a result, birds love to land on oyster cages to rest their wings and possibly find lunch swimming about.

A recent decree from state and federal regulators requires that oyster farms find ways of deterring birds from landing on their gear. As the industry experiments with ways to fulfill this task, we decided we'd play our part.

Our study consisted of observing the effectiveness and cost of 3 types of bird deterrent methods

- Tactile (spikes installed on cages to prevent them from landing)**
- Visual (kites that resemble Bald Eagles, the natural predator to the many bird species of the coastal zone)**

- Auditory (a speaker device which emulates the distress calls of the target bird species)**

After a season of observing these 3 methods at three different farm sites on the Atlantic coast of New Jersey, the results were clear: bird spikes or the 'tactile' method of deterrent is a far superior method, despite the considerable nuisance of having sharp spikes on every cage we must service throughout the year to grow our product.

Birds, as it turns out, are quite smart and adaptable. It didn't take long for them to become accustomed to the recorded sounds of their species under distress as well as the kite printed with an eagle on it.

Farmers of all types have had to contend with nature and specifically birds since humans first began to replace the spear with a hoe. Oyster farmers do not get a pass...but if nothing else, farmers are good at adapting to the conditions handed to them and finding a way.