

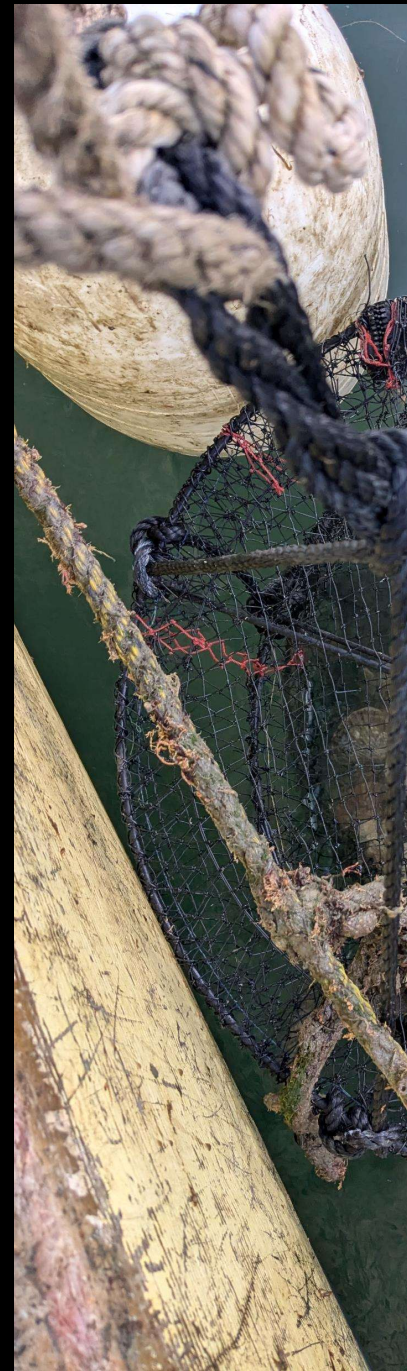
**Northern Bay Scallop
Aquaculture
Winnegance Oyster Farm
West Bath, ME**



Why Bay Scallops?

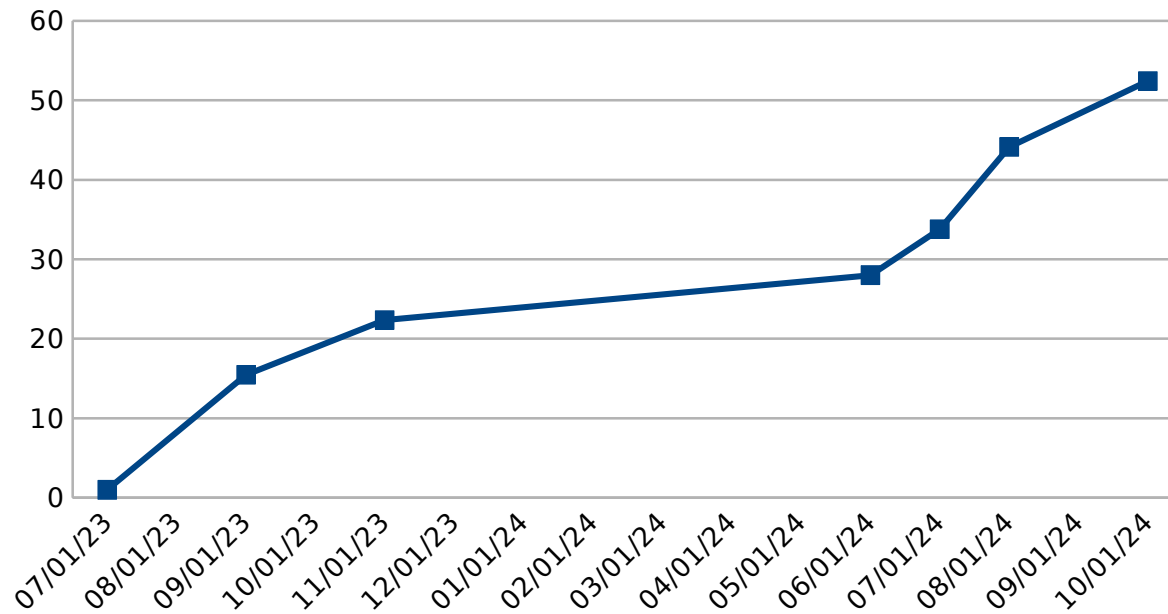
- Develop a crop diversification strategy that anticipates a warming Gulf of Maine
- Bay scallops (along with blue crabs, black bass, squid, etc.) are expanding northward from their traditional southern New England range
- High value wild crop with a short season
- Short time to maturity



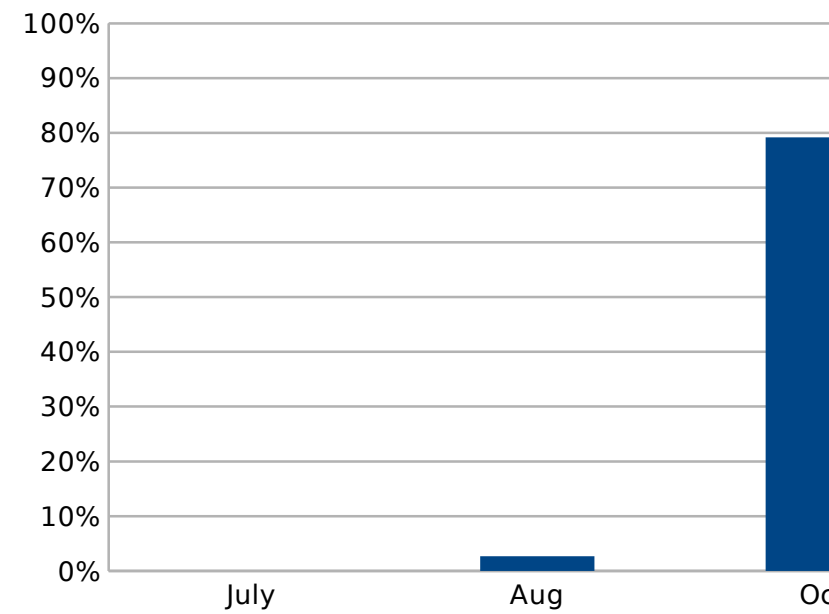


- 1mm seed sourced from Muscongus Bay Aquaculture
- Grown in lantern nets (first in spat bags, then loose)
- First marketable scallops at 13 months
- Majority of scallops were ready at 15 months

Ave. Shell Height (mm)

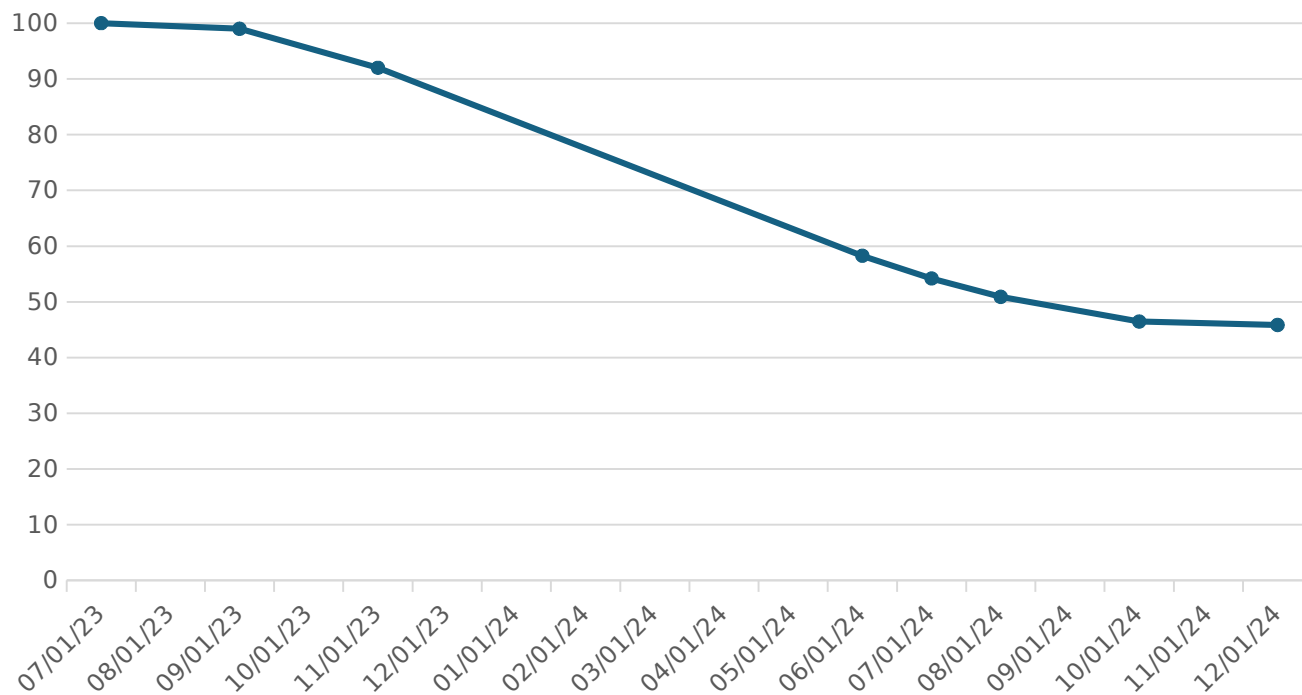


% Marketable (50+mm shells)



- Final survivorship of 46%, with most mortality occurring during winter months
- Major overwinter mussels fouling (unprecedented levels at site in 10 years of operation)
- Unclear if mortality was a product of fouling, temperature, or other factors

Survivorship (%)



Growing season fouling was managed with a lantern-net dryer

This equipment allowed for nets to be partially dried without handling scallops

Dried nets were lighter/less-fouled and easier to handle than nets left submerged. There was no additional mortality associated with drying activity

In previous proof-of-concept work on-site, scallops fared poorly with regular handling (transfer from dirty to clean nets)





Half-dried lantern net

Market

Buyers were instructed to pay a price they thought they could sustain- knowing this was an experimental crop.

Dealers sold abductor-on-shell scallops to retail customers at prices ranging from \$1.50ea to \$3ea. A single dealer bought meats, which sold to mail-order customers for \$90/lb



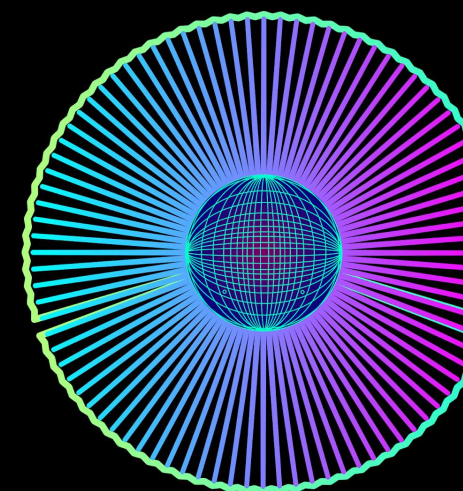
Barriers to adoption

- Low winter survivorship, particularly at smaller sizes
- Without expensive biotoxin testing, scallops can only be sold as shucked meats or abductor-on-shell
- Shucking bay scallops is very labor/time intensive and must be done at sea by the farmer, preventing development of more efficient specialty processors
- Current shortage of lantern nets/pearl nets for growout





This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number FNE23-052



**WINNEGANCE
AQUACULTURE
RESEARCH**