

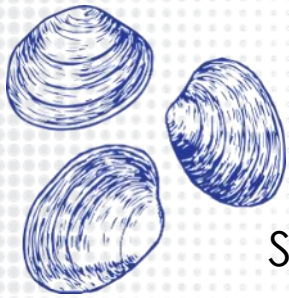
Risk Assessment and Management for Shellfish Growers WORKSHOPS



What about Aquaculture Risks?

- High risk industry that relies on external inputs, such as weather and biological processes, along with internal inputs, such as management decisions regarding labor and capital (Fleisher, 1990)
- Shellfish farming, like any agriculture or aquaculture operation, has major risk sectors beyond the grower's control





Workshop Objectives

Shellfish growers must make numerous decisions regarding various levels of risks in producing their crops.

These workshop will help growers to:

- 1) Assess how their farms are prepared to handle disasters,
- 2) Determine environmental, economic, and business risks,
- 3) Review what crop insurance and disaster assistance programs are available to protect their farms from risks, and
- 4) Learn what additional resources and tools are available to improve risk management.

*These workshops are funded through the USDA Risk Management Agency's Education Partnership Program FY2023-24
Grant # RMA22CPT0013388*



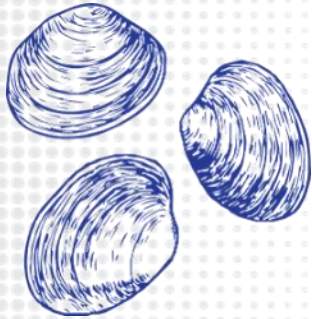
**United States
Department of
Agriculture**

Risk Management Agency



Pre-Workshop Evaluation Survey

Rate your knowledge of risk assessment and management.




Point camera at the QR code, centering it on the screen.
Hold the phone steady for a few seconds.
Tap the notification that appears on the screen



What is Normal Risk in Shellfish Farming?

- Related to occurrences that typically can occur during production
 - Such as inclement weather, predation, fouling, or other variables
- Mortality and costs are factored into the farm's profitability
 - Generally considered acceptable at a certain level



What are Other Risks in Shellfish Farming?

- Production/Environmental Risks – events such as hurricanes or extreme changes in water quality, particularly salinity due to drought, excessive rainfall, or flooding
- Economic/Market Risks – associated with factors that affect farmer's revenue and profitability, such as varying prices, product competition, changes in costs
- Business/Legal Risks – linked to limited finances, such as capital, cash flow, equity, or business structure and liabilities

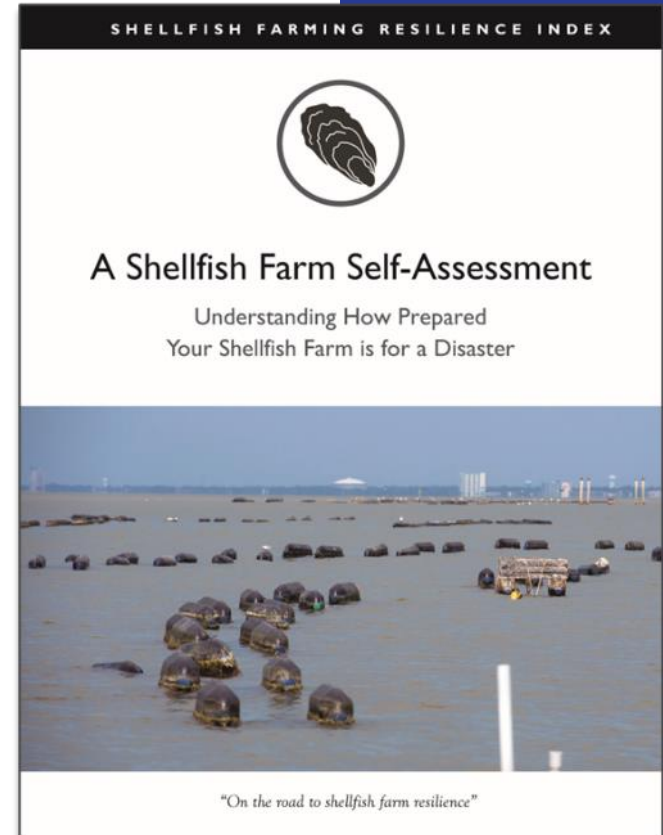
Risk Decision-making in Shellfish Aquaculture

Step 1. Risk Assessment

Identify each possible risk and understand the likelihood and severity of loss

Shellfish Farming Resilience Index

*Rusty Grice, Auburn University Shellfish Lab
Mississippi-Alabama Sea Grant*



Risk Decision-making in Shellfish Aquaculture

Step 2. Risk Tolerance

Determine what level of risk is acceptable or not for farming operations

Production, Environmental and Market Risks: A GIS Mapping Tool / Exercise

Lucas Clay, EcoSolve LLC, Clemson University



Diagram from Maine Aquaculture Risk Management Tools, <https://maineaqua.org/risk-management/>

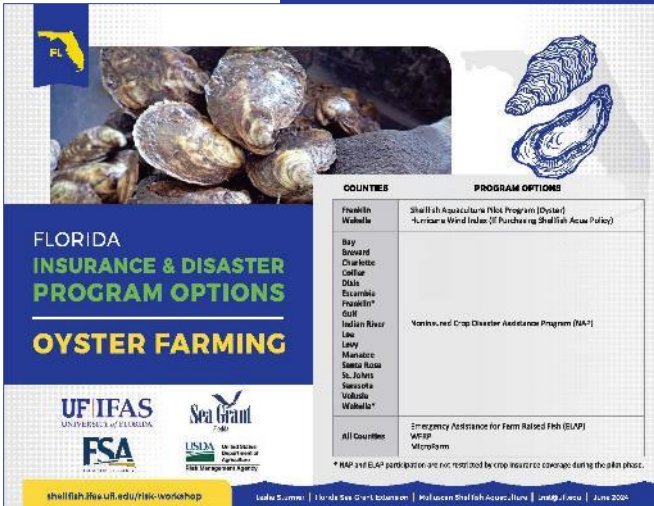
Risk Decision-making in Shellfish Aquaculture

Step 3. Management

Know what insurance programs and options are available

- Production Risk Management
 - USDA RMA Crop Insurance Programs
 - USDA FSA Disaster Programs
- Marketing Risk Management
 - USDA RMA Revenue Insurance Programs
- Legal Risk Management
 - Business Structure, Liability Insurance

*Steven Richards, Clemson University,
SC Center for Cooperative and Enterprise
Development*

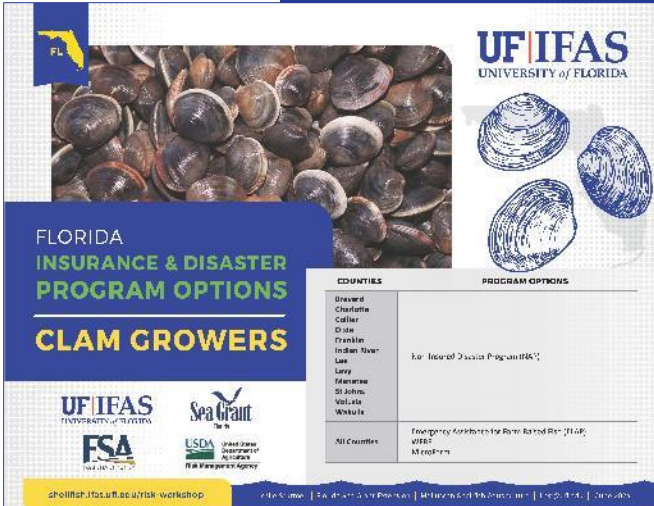


FLORIDA INSURANCE & DISASTER PROGRAM OPTIONS
OYSTER FARMING

COUNTIES	PROGRAM OPTIONS
Franklin Walton	Shellfish Aquaculture Risk Program (DAP) *Larvae Wind Index (If Purchasing Shellfish Acute Policy)
Bay Brevard Charlotte Collier DeSoto Escambia Franklin* Gulf Harrison River Lee Levy Manatee Santa Rosa St. Johns Suwannee Volusia Walton*	Variable and Crop Disaster Assistance Program (DAP)
All Counties	Emergency Assistance for Farm Raised Fish (EAF) WAFIP Mortgage

* DAP and EAF participants are not required to crop insure coverage during the pilot phase.

shellfish.ifas.ufl.edu/trik-workshop | Linda Sumner | Florida Sea Grant Extension | Multicenter Shellfish Acq. Policy | UF/IFAS | June 2020



FLORIDA INSURANCE & DISASTER PROGRAM OPTIONS
CLAM GROWERS

COUNTIES	PROGRAM OPTIONS
Brevard Charlotte Collier DeSoto Franklin Harrison River Lee Levy Manatee St. Johns Volusia Walton	EAF - Federal Disaster Program (DAP)
All Counties	Emergency Assistance for Farm Raised Fish (EAF) WAFIP Mortgage

shellfish.ifas.ufl.edu/trik-workshop | Linda Sumner | Florida Sea Grant Extension | Multicenter Shellfish Acq. Policy | UF/IFAS | June 2020

Risk Decision-making in Shellfish Aquaculture

Step 3. Management

Know what resources, tools, and non-insurance options are available

Resources and Tools to Evaluate and Manage Risks

Leslie Sturmer, University of Florida/IFAS

Andrew Ropicki, UF/IFAS Florida Sea Grant

Sarah Pedigo, South Carolina Sea Grant

Current Resources and Tools



- Shellfish Farming Resilience Index
- Financial Risk in Florida Oyster Culture
- Oyster FARM (Financial And Risk Model) Calculator
- Oyster Farming Business Management Tool
- Enterprise Budget for Oyster Farms
- Estimating Farm Size and Gear Costs for Oyster Culture
- Budget for Existing Clam Farms
- Hurricane Planning Guide for Off-bottom Oyster Farms
- Hurricane Planning Guides for Operations
- Clam and Oyster Farm Inventory Reporting Sheets
- In Development: Enterprise Budgets for Florida Clam Farms