High Impact Investments To Improve Finfish Quality

Gulf of Maine Research Institute

Low Cost Options

Modification/Tool	Cost	Effort	Impacts	Target Market
Regular cleaning *(knives, surfaces where fish are cut, checkerpen)*	Extra time	Every trip	Reduces bacterial contamination; slows degradation; improves shelf life	All
Improved handling *(think fresh fruit, avoid throwing, carefully pack)*	Extra time	Every trip	Reduces bruising and crushing; maintains yield for processing; slows degradation	All
Additional ice	Free up to $120/ton, depending on location	Frequent	Better temperature control and chilling fish to below 40 degrees F with layered ice and/or to ensure adequate chilling during spring/fall seasons	All
Monitor temperature of chilled fish	Extra time + < $100	One-time installation	Thermometer or temperature logger identifies temp fluctuations or if fish is chilling fast enough; informs adjustments to icing practices	All
Slurry ice *(keep fish in slurry for whole trip)*	Extra time + vats	Every trip*	Faster chilling to lower temperatures and reduce bruising/crushing For short trips where whole fish (not gutted) are stored for 24-48 hours in slurry, the additional cost is time and reconfiguring on-deck set up with vats *if it's the primary chilling method	High end

Medium Cost Options

Modification/Tool	Cost	Effort	Impacts	Target Market
Bleeding and/or gutting fish	Extra time	Every trip, depending on species	Improves quality if bled immediately upon killing; gutting prevents bacteria on long trips but must have clean knives / clean surfaces or will spread bacteria and speed up degradation; important to talk with processors about what they want	High end for bleeding
Slurry ice *(chilling with slurry and then moving fish to hold)*	$10-200 / trip in ice Extra time + vats	Every trip*	Faster chilling to lower temperatures and less bruising/crushing For trips where fish are stored in the hold on ice after being chilled in slurry, additional ice is needed, plus time and reconfiguring on-deck set up with vats * if it's the primary chilling method	High end

(Continued on the other side)

Medium Cost Options

Modification/Tool	Cost	Effort	Impacts	Target Market
Insulated vats	$200-1700 / vat Time to clean	Periodic cost for new vats	Improved temperature control and quality, especially for day boats without holds; necessary if using slurry; proper maintenance and cleaning will increase longevity	All
Replace wood with easier to clean materials *(aluminum, stainless steel, etc)*	$450-600 per 4'x8' sheet of 1/8" SS Plus installation	One-time	Wood traps bacteria and is never fully clean, so this reduces bacteria and slows degradation; easier cleaning	All

High Cost Options

Modification/Tool	Cost	Effort	Impacts	Target Market
Insulated fish hold	Retrofit: ~$10-$20K	One time cost	Improved temperature control and improved quality of entire catch	All
Ike jime method of killing fish	Training + Extra time	Depends on market demand	Achieve highest possible fish quality, longest shelf life, and premium prices	High end
Onboard ice machine	~$20-50K (depends on vessel specifics)	One-time plus ongoing costs of maintenance	Address limited space to carry ice; replenish ice as it melts; dockside convenience (don't have to load ice); access flake ice that is not otherwise available	High end
Refrigerated Sea Water (RSW) system	$20-60K	One-time plus ongoing costs of maintenance	System for maintaining and chilling live product (shellfish or finfish)	All / High end for finfish
Shoreside ice machine	$30-60K	One-time plus ongoing costs of maintenance	Consistent access to ice, and potentially to flake ice that is not otherwise available	All / High end
Cutting machine onboard	$50K+ (depends on vessel specifics)	One-time plus ongoing costs of maintenance	Depends on market interest and volume - better impact for higher volume vessels; can allow for freezing at sea	All / High end

This information is based on research done by the Gulf of Maine Research Institute, Cape Cod Commercial Fishermen's Alliance, Maine Coast FIshermen's Association, and processors and fishermen from across New England. To learn more about this project and find other resources on finfish quality, scan the QR code or visit **gmri.org/quality**.