

Shellfish - Mariculture

Alaska

Priorities

Research, Training, Development

&

Information Needs

Prepared at Summit Meeting

Ketchikan - October 26, 2011

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Topic 1. Secure seed supply, of existing seed types, oyster and geoduck.

- 1.1 Improve quantity of in-state production of oyster and geoduck seed*
- 1.2 Improved quality of the seed available to farmers in Alaska*
- 1.3 Secure Alaska broodstock*
- 1.4 Selective breeding of Pacific oysters, regionally specific to different areas of Alaska*
- 1.5 Diversification of species, develop sources of seed for native shellfish species*
- 1.6 Establish hatchery, nursery and grow-out techniques for rearing shellfish species with current or emerging potential for private, public and tribal shellfish aquaculture, enhancement, restoration and mitigation.*

Topic 2. Cooperative studies/ research/ monitoring

- 2.1 Cooperate with the Pacific Shellfish Institute and other research agencies to develop a pacific oyster breeding program and other genetic research*
- 2.2 Develop programs to assist in identification of techniques for new species production*

Topic 3. Increase shellfish production

- 3.1 Assist existing farmers to increase the production from existing farms.*
- 3.2 Assist in developing infrastructure to attract new farmers, including, lease site, seed supply, financing and education and training.*
- 3.3 Assist new farms in a region to work together, ie. Processing, shipping*

Topic 4. Shellfish education, training and outreach

- 4.1 Establish training, education and outreach programs for new and existing farmers*
- 4.2 Implement outreach programs to attract new farmers*
- 4.3 Create education and outreach information for the public, outside the mariculture sphere*
- 4.4 Create education programs and cooperative programs for public schools, (K-12).*

Topic 5. Shellfish disease and pathology management

- 5.1 Collaborate with regional, state and federal entities to research and understand the impact of ocean acidification on shellfish spat*
- 5.2 Create a monitoring program for use by farmers to supply timely information and data regarding ocean conditions.*

Topic 6. Shellfish ecology / site selection

- 6.1 Identify five potential areas that can become economically viable clusters for shellfish farms in southeast Alaska.*
- 6.2 Identify the impacts and benefits of creating clusters of shellfish farms to the farmers, environment, area economy and local communities.*
- 6.3 Create and provide informational and educational materials to use in presentations and discussions with all users of the potential cluster areas.*
- 6.4 Quantitatively document environmental and economic impact and contribution of shellfish aquaculture.*

Topic 7. Enhancement and restoration of native shellfish stocks

- 7.1 Establish a research program for enhancement of sea cucumbers, geoducks, abalone and sea urchins.*
- 7.2 Develop a regulatory structure to encourage and provide enhancement activities for native shellfish stocks*
- 7.3 Develop a plan to enhance subsistence clam beaches*
- 7.4 Research the opportunity to culture Kelp (sugar laminaria, giant kelp. Bull kelp, porphyra, palmaria) for economic viable business.*
- 7.5 Develop the opportunity for polyculture activities on various shellfish farms*

7.6 Support the work and research by other concerned stakeholders working on the variety issues surrounding the growth of the sea otter population and the resulting impacts on the food supplies

7.7 Identify enhancement needs and develop the criteria to determine feasibility for successful enhancement programs.

Topic 8. Invasive species management

8.1 Develop enhanced management techniques for invasive non native tunicates

8.2 Develop monitoring programs and management techniques for invasive non native European green crab

8.3 Establish monitoring programs for identification of northern anchovies in southeast Alaska waters.

Topic 9. Human health and shellfish

9.1 Improve understanding of the dynamics of Paralytic Shellfish Poisoning (PSP) accumulation in geoducks and other bivalve shellfish species,

9.2 Develop Vibrio

9.3 Improve understanding and dynamics of domoic acid accumulation in all bivalve shellfish species.

9.4 Support research directed at developing effective methodologies to control the impacts of marine biotoxins, bacteria, viruses, and heavy metals in live shellfish.

Topic 10. Water quality

10.1 Develop a strategy to respond to water quality issues in shellfish growing areas.

Topic 11. New methods and new products

11.1 Investigate methods of processing shellfish to reduce costs, increase quality and improve productivity

11.2 Develop a library of best practices for processing shellfish

11.3 Produce data and information regarding beach culture for growing oysters in southeast Alaska.

11.4 Investigate and report on shellfish farming systems that reduce mortality in shellfish and reduce cost of labor in all aspects of the farm structure

11.5 Investigate farm methods and provide information that improves the ergonomics that will reduce the risk of physical injuries.

Topic 12. Marketing strategies

12.1 Research and report to the shellfish industry the opportunity, means and methods for self marketing farm shellfish products.

12.2 Research and report to the shellfish industry the opportunity and methods to develop a web based marketing program.

12.3 Research and report the benefits of cooperative activities in marketing shellfish products.

Topic 13. Policy and regulations

13.1 Develop strategy to foster a positive regulatory environment with state and federal authorities which supports environmentally sound shellfish culture.

*13.2 Develop a strategy to approach the Alaska Board of Fish and other state agencies regarding the importation of oyster species other than *C. gigas*.*

13.3 Promote the shellfish industries Environmental Policy

13.4 Encourage more effective risk assessment and risk management by agency personnel which recognizes the positive beneficial effects of shellfish aquaculture for the environment.

List of attendees at the October 26, 2011, priority setting meeting Ketchikan, Alaska

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