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**The Importance of Aquaculture to Virginia's Economy:
A Preliminary Assessment**

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Economic Impacts Generated from Virginia Aquaculture Production and Sales^a

Species/Group	Sales Dollars	Output Dollars	Income Dollars	Employment Person-years
Hard Clams	8,032,000	21,648,200	10,615,400	360
Soft-shell crabs	4,840,142	23,544,500	16,112,000	540
Oysters	62,160	161,069	75,972	3
All other saltwater	1,502,000	9,958,220	7,575,020	252
Total Saltwater	14,436,302	55,311,989	34,378,392	1,155
Trout	2,255,044	12,146,000	8,962,100	295
Catfish	28,329	152,586	112,677	4
Hybrid striped bass	41,986	226,143	166,995	5
All other freshwater	2,897,944	15,608,800	11,526,300	380
Total Freshwater	5,223,303	28,133,529	20,768,072	684
All Aquaculture	19,659,605	83,445,518	55,146,464	1,839

^aSince it is not possible to compare different physical types of outputs, output is measured in dollar terms. Formally, output is defined as the gross sales by aquaculture producers, aquaculture support industries, and sales generated from personal consumer expenditures by individuals employed in aquaculture or support businesses. Income equals personal income, proprietors' income, and property-type income; total income thus equals wages and salaries, bonuses, income from self-employment, corporate income, rental income, and interest.

AQUACULTURE

Historical elements of the VIMS/SMS aquaculture program have embraced research in hatchery technology and grow-out strategies for the successful commercialization of hard clams and oysters. Similarly, research and advisory activities in blue crab shedding technology have led to the expansion and economic viability of the soft crab industry. The long-term goal of aquaculture development is successful commercialization followed by industry expansion, improvements in economic efficiency, and product diversification. Current and future efforts are focused on the biology of candidate species for industry diversification, improved grow-out strategies for shellfish and marine fish, economics, disease and pathogen control and a well-defined advisory and technology transfer program. Included within this program is research into the feasibility of introducing non-native species of oysters in the Chesapeake Bay as called for by House Joint Resolution 450 and the resulting Strategic Plan for Molluscan Shellfish Research.

Program elements

- Genetics and Breeding Technology
- Biology (target species)
- Nutritional research
- Non-native research
- Disease processes
- Microbial biology (human pathogens)
- Coastal management and policy
- Resource economics and business
- Industry development
- Outreach
- Aquaculture engineering
- Ecosystem modeling for stock enhancement
- Broodstock domestication