Why We Need Finfish Aquaculture and NOAA’s Resources for Helping Develop It

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Despite recent growth in the shellfish and seaweed sectors, finfish aquaculture in the United States has remained stagnant over much of the last couple decades. At the same time, the US consumer is eating mostly finfish. Of the top 10 seafood items consumed by Americans in 2017, seven were finfish, two were crustaceans and one was a mollusk. The top 10 items have accounted for 84-97% of total US consumption over the last 12 years. Aquaculture’s contribution to the top ten averaged over the last two years (2016 and 2017) was 57% by weight; about half from shrimp and half from four fish (Salmon, Tilapia, Pangasius and Catfish). Very little of this was from US production and almost none from marine fish production. Consumption data from 2005-2017 was used to compute the per capita dose of long chain omega-3 fatty acids (LCn-3FA, EPA + DHA) delivered to the average American through seafood. A minimum dose of 250 mg EPA+DHA/d is recommended by numerous health organizations including the American Heart Association. Seafood is the primary natural source of LCn-3FA’s and is the dominate source consumed by humans. During the period, the top ten have provided between 72-84 mg/d per capita dose to the average American. Aquaculture provided an average of 55% of the per capita dose of LCn-3FAs in 2016 and 2017. Farmed Salmon provided the largest contribution to American’s LCn3FA dose with 29% of the total. To reach dietary recommendations for LCn-3FAs we need to greatly increase our consumption of seafood of all types, however farmed fish are the most promising option to significantly increase LCn-3FA consumption by Americans due to their popularity with consumers, relatively higher concentrations of LCn-3FA’s relative to other genera, and the ability to increase the amount of LCn-3FA’s in farmed fish through dietary manipulation. How much of this will be produced domestically?

NOAA has a long history of investing in finfish development. For example, NOAA grant programs (Sea Grant, SK, and SBIR) have supported most of the researchers in this session. NOAA labs provide some key infrastructure (e. g. hatchery and feed manufacture) and NOAA products aid in site selection and permitting (e. g. Aquamapper, MarineReports, and other marine spatial analysis and modelling tools/services). Based upon the lack of growth in the industry over the past decades, this has not been sufficient. To that end we are assessing how we can best use our limited finfish aquaculture resources to increase sustainable production of the farmed fish our population desperately needs.