

FAO recently announced that aquaculture (the controlled farming of aquatic species) was the world's fastest growing sector of animal protein production. There is a reason for this. Most of the world realizes that seafood is a high quality and concentrated protein source to feed their people, and aquaculture has a lot of promise and growth potential. Many countries are investing heavily in aquaculture development, except the US which currently appears content with simply importing the vast majority of its seafood. The US imports 85% of its seafood accounting for a \$10 billion trade deficit. However, the US is rolling dice with its future. As seafood demands grow worldwide, there will be increasing concerns about the supply, safety, and sustainability of seafood in the US. For instance, China, the world's largest producer of aquacultured products and once the world's largest exporter of shrimp, is predicted by 2013, to become a net importer of shrimp because of the projected population increase and the increasing demand for seafood as incomes rise in that country. This will cause reduced supply in the US as other producing countries divert their exports to China. Reductions in quality in the US will naturally occur as the US scampers to fill its demands with whatever is left over. Increased price, lowered quality, and less choice (variety) is what the US can expect in the very near future. Already, there are concerns for the safety of our imported seafood by unsustainable practices that occur in other countries from which we already import heavily. Antibiotics, melamine, salmonella are just a few examples. The US wild capture fisheries simply cannot supply the demands for seafood in the US and stocks are already fished to maximum yield. We cannot get more fish out of the oceans. Aquaculture is the only way for the US to meet current demands and fulfill future protein needs of its people as protein sources become increasingly limited through a rapidly growing world population.

The US should not wait for an inevitable "seafood crisis" in this country. The US should be proactive and invest in programs that support the development of aquaculture nationwide now. The US should not be dependent on foreign supplies and market forces it cannot control. Currently, the US lags sorely behind other countries who have established and well-funded national programs for aquaculture. Part of the problem has been that no one agency has taken the lead in aquaculture development in the US. At last year's Aquaculture America conference in New Orleans, it was indicated that approximately 13 federal agencies are involved at some level with aquaculture. This is wasteful bureaucracy, creates a myriad of conflicting regulations, and frustrates development of the industry and jobs creation. The National Marine Fisheries Service under NOAA, for instance, has indicated that development of aquaculture in the US is the only way to create jobs in the seafood sector and increase the supply of seafood in this country. Yet the NMFS budget for aquaculture is \$8 million/year for the entire country.

One strategy is to establish a well-defined National Aquaculture Agency in the US that has the responsibility to coordinate, develop, and promote aquaculture in the US. This agency would be well-funded to help establish policy and clear guidelines, rules, and regulations for promoting aquaculture. It would also be the primary funding arm for research and development projects. Existing monies can be shifted from unsustainable and unpopular programs, and programs that just collect information rather than actually creating something. A budget of \$50 million per year would be targeted. Yet government should also promote industry buy-in a co-investment of this effort so both the agency and industry are vested.

One idea in which to accomplish this buy-in is by creating public-private partnerships in establishing research and development centers in strategic areas of the country to help support commercial investment in aquaculture. Government funded research centers targeting species and technologies specific for the regions are one of the best, most vested ways to proceed that would have immediate

success and impact, and which has a successful track-record in other countries. These centers would provide both the research and logistical support need to spur investment and success. For instance, the establishment of broodstock animals often takes years for a commercial company to develop, and is usually a large, upfront cost for a nascent company. Several years of time, money, and risk would be expended until the animals produce eggs without cash flow into the investment. This frustrates investment and makes for a difficult business model. The federal government can help industry by absorbing these upfront costs by establishing broodstock centers of targeted, regional species (targeted by industry) to supply eggs and fingerlings (juvenile fish) for upcoming farms. Bypassing the expense of establishing broodstock anew would allow farmers to have almost immediate cash flow into their operations by obtain fingerlings to stock into growout, and establish themselves in the marketplace. This cashflow would then allow farmers to invest the time and money in developing their own broodstock capabilities. Once industry establishes broodstock capabilities after already having established themselves as a viable business, the Center would then transition from that species onto the next species for development.

Thank you for considering these thoughts.

Best regards,

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