

Appendix B:

Aquaculture Production Systems and Associated Species and Regions

System	Description	Species Associated with System ¹	Region of Concentration
Pond	Located outdoors; may come in various depths, shapes, and sizes; floating cages in ponds, quarries, or reservoirs	<i>Catfish</i> , baitfish, crawfish; a little U.S. pond production of pike, freshwater prawn, shrimp	Found in almost every state; major concentration in the Mississippi River Delta region
Flow-through (raceways/tanks)	A raceway or series of tanks through which water flows continuously	<i>Trout</i> , salmon, alligator proposed: sea bass, Arctic charr	Idaho, although grown in most states
Recirculating	Culture system with water reconditioning capabilities, such that 50-90% of water can be re-used; idea is similar to a home aquarium	<i>Tilapia</i> , sturgeon, hybrid bass, red drum, trout, largemouth bass, softshell crabs, tropical fish; pioneer efforts: striped bass, redfish, catfish, and summer flounder	Commercial recirculating systems are found in almost all parts of the country (16)
Nearshore (net pens/rafts/bottom)	Anchored or floating net pens and rafts; seeding the bottom of the water column and allowing natural growth	<i>Salmonids</i> (surface), <i>oysters</i> (bottom), clams, mussels and other shellfish	All coasts
Offshore	Advanced technology, commonly designed to have automatic feeding systems, areas for input storage, operator quarters, and sometimes on-site processing; for example, one design consists of a central dome and work platform above the surface with six 160-foot long barrel-like cages extending out like spokes 50 feet underwater for raising fish (13)	Proposed: Atlantic salmon, several species of Pacific salmon, red drum, dolphin fish (mahi-mahi), red snapper, cobia, mackerel, halibut, gilthead seabream, and sea bass	No commercial facilities; first approved facility under construction in the Gulf of Mexico
Integrated	Ponds located close to agriculture fields, greenhouses, or hydroponic systems; sequential tanks or raceways of species that can use waste products as inputs (e.g., catfish to algae to carp)	Several types of submerged, floating and emergent aquatic plants; zooplankton, crawfish, prawns, shrimp, blackfish, carp, tilapia, catfish, white amur, and mosquito fish	Inland areas

Source: Office of Technology Assessment, 1995

¹ Species found most frequently in the associated system are represented in italics.