What is aquaculture?
Farming in the water

WHAT DO FARMERS GROW IN THE WATER?

People have been farming in the water for thousands of years. Around the world, farmers grow aquatic crops such as clams and oysters, shrimp, kelp, and dozens of species of fish. In Michigan, seafood farmers raise crops such as trout, salmon, tilapia, bass, yellow perch, minnows, lake whitefish, shrimp, and more.

WHY FARM FISH AND OTHER AQUATIC CREATURES?

FOOD
Seafood can be a healthy source of protein, vitamins, and minerals.

DEMAND
In the next 20 years, global demand for seafood is expected to rise (see graphic).

SUSTAINABILITY
Farming seafood can take pressure off dwindling wild populations.

EFFICIENCY
Fish and other underwater crops need less space, food, and energy than traditional livestock animals.

Fish can also be farmed as bait, raised as pets, stocked (released to boost wild populations), or grown in classrooms.

HOW DO FARMERS GROW THESE CROPS?

Globally, farmers raise aquatic crops in lakes, streams, or oceans. Others move their operations into ponds, tanks, or pools, some of which can be located indoors. Aquaculture farms usually fit into one of these categories:

EVERY AQUACULTURE FARM NEEDS

Food coming in
Waste going out
Oxygen in water

RACEWAYS
Rectangular channels with a steady flow of water from springs, wells, or nearby streams.

RECIRCULATING
Tanks or pools, often indoors, with a water supply that’s filtered, reused, and also replaced.

PONDS
Pools that may be drained or divided so farmers can easily harvest their crops.

NET PENS
Outdoor cages placed in bodies of water where fish are raised.

Pounds of feed to produce one pound of animal.

SALMON 1.3
CHICKEN 1.9
PORK 3.9
BEEF 8

N. AMERICA 20%
ASIA 40-50%
WHY FARM FISH IN MICHIGAN?

About 90 percent of seafood sold in the U.S. is imported from other countries. Even in Michigan, where we have a wealth of fresh water, we import about 95 percent of our seafood! What if we farmed some of the fish here instead?

- Farmed fish can complement products from commercial fisheries.
- Shorter supply chains deliver fresher fish to markets and kitchens.
- Farms stock fish species approved by Michigan regulators. Local zoning determines farm locations.
- Consumers know exactly where their products are coming from — and might even be able to visit the farm in person!

WHAT ARE SOME POTENTIAL DRAWBACKS TO FARMING FISH IN MICHIGAN?

- Overcrowded tanks and ponds can put some farmed fish at higher risk of injury and disease.
- While diseases can move between wild and farmed fish, most farms stock certified disease-free fish.
- Farms that don't meet state regulations could put too many nutrients back into the environment, causing problems like algal blooms.
- Farms can be very expensive to start and may take a long time to become profitable.

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