Growing Catfish in Oregon—Does It Pay?

Raising catfish commercially was a new and exciting subject during the 1960s when culture techniques were being perfected. Markets were developing, and catfish farms were being established throughout the South and warmer parts of the Midwest and California. The fish has a slightly sweet flavor, light meat, and few bones. Many people consider the flesh a delicacy. The success of commercial catfish operations in other states has prompted numerous inquiries on the potential for commercial catfish culture in Oregon.

Several species of catfish have been introduced to Oregon, but usually only three do well: the channel catfish, Ictalurus punctatus; the brown bullhead, I. nebulosus; and the yellow bullhead, I. natalis. Only the channel catfish is raised commercially; bullheads are used primarily for recreational fishing.

The channel catfish is native to the Mississippi River and adjacent drainages, and it has been introduced to many locations in the West. It is a warm-water fish. Spawning takes place at about 72° F (22° C). Feeding begins at about 60° F (17° C), but fish do not grow well below 70° F (21° C). Best growth is at temperatures from 80 to 85° F (27 to 29° C). In their native range, wild channel cats commonly reach more than 6 inches (15 cm) total length the first year, 10 inches (25 cm) the second, 12 inches (30 cm) the third, and 14 inches (36 cm) the fourth.

Traditional channel catfish culture

Culture of channel catfish is being carried on successfully in the Midwest and South (north to Kansas and Missouri) and California. Excellent success is reported from Louisiana, Mississippi, Arkansas, and the Imperial Valley of California.

Catfish ponds usually range from 1 to 2 acres (0.4 to 2.0 ha) in area. Success in operations usually have a minimum of 14 to 40 acres (6 to 16 ha) of ponds. When a large quantity of high-quality warm water is available, catfish can be reared in cool water in raceways. Fingerlings are reared and purchased and planted in product ponds in the spring at about 1,200 to 2,000 per acre (3,000 to 5,000 per ha). Fingerling costs vary, depending on supply and transportation costs.

Fish are fed a diet of food containing about 30 percent protein and 5 percent fat 6 days a week at water temperatures from 70 to 90° F (21 to 32° C). About 200 days of growing temperatures (greater than 75° F, or 24° C) are needed to bring the fingerling channel catfish to the market size of about 1 1/4 pounds (570 g).

Channel catfish culture in Oregon

Channel catfish are present in the Columbia, Snake and Willamette rivers, plus some lakes and small drainage systems. Growth in the wild is slower in Oregon than in the Midwest and South, especially for the first 4 years of life. Five to 6 years are necessary to bring channel catfish to 1 1/2 pounds (680 g) in Oregon.

Research at Oregon State University with channel catfish grown in experimental ponds indicates that few fish reach minimum market size in a year after being planted as yearlings. Channel catfish do not respond well to feeding during Oregon’s relatively short growing season, which ranges from about 120 to 150 days with water temperatures over 60° F (16° C). Six groups of catfish fed pellets reared in half-acre ponds, and others fed in cages, were able to reach market size in one growing season.

Growers in Idaho use geothermally heated water to raise catfish in raceways. One grower raises 400,000 to 500,000 pounds of catfish a year per half acre (900,000 to 1,113,000 kg per ha). Water temperature over 60° F (16° C). Six groups of catfish fed pellets reared in half-acre ponds, and others fed in cages, were able to reach market size in one growing season.

Production costs and net returns of catfish farming

Estimates of investments needed to start a catfish operation vary, but they are considerable. They include land acquisition, construction for ponds, harvesting equipment, and water distribution systems. Operating expenses must also be calculated; these include costs of fingerlings, feed, chemicals, fuel, water, and taxes. A California publication (Catfish Farming in California: An Economic Guide, University of California, Leaflet 2892) lists investment costs of $9,850 and yearly costs of about $4,337 on a 5-acre (2.5-ha) pond and $18,000 investment and $7,922 annual operating costs on a 10-acre (4-ha) pond. Net return (profit) was $994 for the 5-acre pond and $3,588 for the 10-acre pond.
These costs and returns assume that water temperature is ideal for growing catfish, as it is in California. In Oregon, added costs for heating water might well eat up all the profits.

Marketing catfish

If you can afford to grow catfish (you have a source of heated water and already have the land and pond), you must determine whether there is a reliable market for your product. A strong demand for catfish exists in California and to a limited extent in Seattle, but Oregon catfish must compete with catfish grown in the Southeast, which are much cheaper to grow and can be grown year around. You might canvass local and regional markets for catfish and find some limited demand that might be met more economically by a local outlet than by importing fish from the southern states.

Until more data on production, management, and marketing information can be obtained for Oregon, we recommend that any Oregonian venturing into the commercial production of channel catfish do so only on an experimental basis.

HELPFUL PUBLICATIONS

Catfish production, pond construction

Economics

Commercial publication
Aquaculture (P.O. Box 2451, Little Rock, AR 72203) is a bimonthly “how-to” publication that emphasizes articles on catfish production.

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