

Aquaculture

Wisconsin Aquaculture Resource Guide

Aquaculture is growing in importance worldwide. In its many facets, aquaculture includes the production of all kinds of aquatic animal and plant species for food, stocking, bait and industrial uses.

Some experts predict aquaculture output will increase as much as 400 percent worldwide. Wisconsin could share in this growth Wisconsin's opportunities lie in several directions. State, public, and private facilities are being called upon to

supply more warm- and cold-water species both for stocking recreational fisheries and as food fish for consumers. An industry advisory committee, assisted by university and state agencies is guiding aquaculture development in Wisconsin.

This document is designed to serve as an introductory reference for people interested in starting a fish farm or an aquaculture operation.

ORGANIZATIONS

For an industry perspective and information on raising a variety of fish species, contact:

Wisconsin Aquaculture Association
1029 Clam Falls Road
Frederic, WI 54837-4705
(715) 653-2271
Fax (715) 653-4129

Wisconsin Aquaculture Industry Advisory Council
2811 Aquaculture Drive
P.O. Box 8911
Madison, WI 53708-8911
(608) 224-5135
FAX (608) 224-5511

World Aquaculture Society
143 Jim Parker Coliseum
Louisiana State University
Baton Rouge, LA 70806
(504) 388-3137

○ Fish Propagation

Information on the propagation of fish by the Wisconsin Department of Natural Resources can be obtained from:

Fish Propagation Specialist
Wisconsin Department of Natural Resources
P.O. Box 7921
Madison, WI 53707-7921
(608) 267-7865
FAX (608) 267-7857

○ Fish Health

Information on fish diseases and general fish health can be obtained from several Wisconsin veterinarians and from:

Fish Health Specialist
Wisconsin Department of Natural Resources
P.O. Box 7921
Madison, WI 53707
(608) 266-2871

Fish Disease Specialist
LaCrosse Fish Health Center
US Fish & Wildlife Service
555 Lester Ave. Ste #100
Onalaska, WI 54650-8552
(608) 783-8444
FAX (608) 783-8450

Division of Animal Health
WDATCP
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 53708-8911
(608) 224-4872
FAX (608) 224-4871

TECHNICAL ASSISTANCE

○ Fish Production

The University of Wisconsin Sea Grant Institute Advisory Services Program provides education and assistance on the business of raising fish. For information, contact:

Aquaculture Specialist
UW Sea Grant Advisory Services
Great Lakes WATER Institute
600 E Greenfield Avenue
Milwaukee, WI 53204
(414) 382-1700

TECHNICAL ASSISTANCE (Continued)

○ Food Processing

The University of Wisconsin-Madison provides education and assistance in the processing of fish for food. For information, contact:

Food Safety Extension Specialist
Department of Food Science
Room A103B, Babcock Hall
University of Wisconsin-Madison
Madison, WI 53706
(608) 265-4801
FAX (608) 273-5958

○ State Regulations

The Wisconsin Department of Natural Resources (WDNR) regulates aquaculture in relation to fish stocking in public waters, water quality, water use, importation of fish species, and licensing of private hatcheries. For information, contact:

Northeast Region Fisheries Expert
Wisconsin Department of Natural Resources
110 S. Neenah Avenue
Sturgeon Bay, WI 54235
(920) 746-2874
FAX (920) 746-2863

Northern Region
Wisconsin Department of Natural Resources
810 West Maple Street
Spooner, WI 54801
(715) 635-4152
FAX (715) 635-4105

South Central Region
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711
(608) 273-5967
FAX (608) 275-3338

Southeast Region
Wisconsin Department of Natural Resources
W5750 Woodchuck Lane
P.O. Box 408
Plymouth, WI 53703-0408
(920) 892-8756
FAX (920) 892-6638

West Central Region
Wisconsin Department of Natural Resources
3550 Mormon Coulee Road #104
LaCrosse, WI 54602
(608) 785-9013
FAX (608) 785-9990

The Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP) is responsible for the annual registration of fish farms, fish import permits for live fish and eggs, and for all matters related to fish health. For information, contact:

Division of Animal Health
WDATCP
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 53708-8911
(608) 224-4872
FAX (608) 224-4871

The Wisconsin Department of Agriculture, Trade and Consumer Protection (WDATCP) regulates fish processing under Chapter 97, stats. For information, contact:

Division of Food Safety
WDATCP
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 53708-8911
(608) 224-4716
FAX (608) 224-4710

○ Business Development

The University of Wisconsin-Extension Small Business Development Centers offer education in business planning and one-to-one counseling. For information, contact:

| | |
|------------------|----------------|
| UW-Eau Claire | (715) 836-5811 |
| UW-Green Bay | (920) 465-2089 |
| UW-La Crosse | (608) 785-8782 |
| UW-Madison | (608) 263-2221 |
| UW-Milwaukee | (414) 227-3240 |
| UW-Oshkosh | (920) 424-1541 |
| UW-Stevens Point | (715) 346-2004 |
| UW-Superior | (715) 394-8351 |
| UW-Whitewater | (414) 472-3217 |

The Wisconsin Department of Commerce helps small businesses identify the required permits and find financial support. For information, contact:

1-800-HELPMUS (1-800-435-7287)
or
Small Business Ombudsman
Wisconsin Department of Commerce
P.O. Box 7970
Madison, WI 53707
(608) 267-9384

○ Marketing

Help in the marketing of aquaculture food fish products can be obtained from the Wisconsin Department of Agriculture, Trade and Consumer Protection. For information, contact:

Division of Marketing
WDATCP
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 53708-8911
(608) 224-5133
FAX (608) 224-5111

UNIVERSITY RESEARCH

The University of Wisconsin conducts aquaculture research at several of its campuses. For additional information, contact the UW Sea Grant Aquaculture Specialist or visit UW Sea Grant's "Research in Aquaculture and Seafood Technology" Web site.

UW-Madison Aquaculture Center
University of Wisconsin-Madison
103 Babcock Hall
Madison, WI 53706
(608) 263-1242
FAX (608) 273-5958

University of Wisconsin Aquaculture Institute
Great Lakes WATER Institute
600 E Greenfield Avenue
Milwaukee, WI 53204
(414) 382-1700
FAX (414) 382-1705

UW-Stevens Point
Cooperative Fisheries Research Unit
College of Natural Resources
University of Wisconsin-Stevens Point
Stevens Point, WI 54481
(715) 346-2178
FAX (715) 346-3624

PUBLICATIONS

Many of the publications listed are available at local public libraries or through interlibrary loan.

○ Periodicals

Aquaculture Letter (biweekly)
3400 Neyrey Drive
Metairie, LA 70002

Aquaculture Magazine (bimonthly)
P.O. Box 2329
Asheville, NC 28802

Northern Aquaculture
4611 William Head Road
Victoria, B.C. V8X 3W9

The Progressive Fish-Culturist (quarterly)
American Fisheries Society
5410 Grosvenor Lane Suite 110
Bethesda, MD 20814

Water Farming Journal (monthly)
3400 Neyrey Drive
Metairie, LA 70002

World Aquaculture (quarterly)
143 Jim Parker Coliseum
Louisiana State University
Baton Rouge, LA 70806

○ Books

Culture and Diseases of Game Fishes. H.S. Davis. 7th Reprinting. Berkeley and Los Angeles: University of California Press, 1973.

Culture of Non-Salmonid Freshwater Fishes. Robert Stickney, ed. Boca Raton: CRC Press, 1986.

Fish Hatchery Management. Robert G. Piper, ed. Washington: U.S. Department of the Interior, Fish & Wildlife Service, 1982.

The Freshwater Aquaculture Book: A Handbook for Small-Scale Fish Culture in North America. William McLarney. LC84-80961, ISBN 0-88179-002-8. Hartley and Marks, 1984.

Management of Lakes and Ponds. George W. Bennett. LC83-6091, ISBN 0-89874-626-4. Reprint of 1970 edition text. Krieger, 1983.

Principles of Warmwater Aquaculture. Robert Stickney. New York: Wiley, 1979.

Trout and Salmon Culture: Hatchery Methods. Robert Conklin Lewis. State of California, Department of Fish and Game, 1976.

○ Reports

Wisconsin Aquaculture: A State Plan. State of Wisconsin: Wisconsin Aquaculture Study Committee, 1988. Contact WDATCP (608) 224-5135.

Wisconsin Aquaculture: An Industry Profile. Aquaculture Producers Survey. 1998. Contact WDATCP (608) 224-5135.

Wisconsin Aquaculture: An Industry Profile. Aquaculture Processors Survey. 1998. Contact WDATCP (608) 224-5135.

PUBLICATIONS (Continued)

○ Pamphlets

Choosing an Organizational Structure for Your Aquaculture Business. S.T. Kohler and D.A. Selock. South Illinois University. North Central Regional Aquaculture Center Fact Sheet #103, June 1992. (Available from UW Sea Grant.)

Handbook for Common Calculations in Finfish Aquaculture. Gary Jensen. Louisiana Agricultural Experiment Station & Louisiana Cooperative Extension Center. Louisiana State University Agricultural Center, August

Making Plans for Commercial Aquaculture in the North Central Region. D.L. Garling. Michigan State University. North Central Regional Aquaculture Center Fact Sheet #101, March 1992. (Available from UW Sea Grant.)

Pond Culture of Walleye Fingerlings. L.M. Harding, C.P. Clouse, R.C. Summerfelt and J.E. Morris. Iowa State University. North Central Regional Aquaculture Center Fact Sheet #102, March 1992. (Available from UW Sea Grant.)

Sea Grant Aquaculture in the Great Lakes Region — A Publications List. Great Lakes Sea Grant Network. Piketon, Ohio: The OSU Piketon Research & Extension Center, 1991. (Available from UW Sea Grant.)

Use and Application of Salt in Aquaculture. L. Swann and S. Fitzgerald. Purdue University. North Central Regional Aquaculture Center Fact Sheet #105, June 1992. (Available from UW Sea Grant.)

- **The AquaNIC Web site is a gateway to the world's electronic resources for aquaculture.**
<http://ag.ansc.purdue.edu/aquanic>

Additional copies of this publication are available from:

University of Wisconsin
Sea Grant Institute
1800 University Avenue
Madison, WI 53705-4094
(608) 262-0645
FAX (608) 263-2063
www.seagrants.wisc.edu/Advisory/Aquaculture/index.html

University of Wisconsin Aquaculture Institute
Great Lakes WATER Institute
600 East Greenfield Avenue
Milwaukee, WI 53204-2944
(414) 382-1700
FAX (414) 382-1705

UW-Madison Aquaculture Center
University of Wisconsin -Madison
103 Babcock Hall
Madison, WI 53706
(608) 263-1242
FAX (608) 273-5958

Wisconsin Aquaculture Association
1029 Clam Falls Dr.
Frederic, WI 54837-4705
(715) 653-2271
FAX (715) 653-4129

Wisconsin Department of Agriculture, Trade
& Consumer Protection
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 53708-8911
(608) 224-5137
FAX (608) 224-5111

Wisconsin Department of Natural Resources
Fisheries Management
101 S Webster Street
P.O. Box 7921
Madison, WI 53707-7921
(608) 267-1877

UNIVERSITY OF WISCONSIN
SEA GRANT INSTITUTE

OCT 6 1998

This work was funded by the University of Wisconsin Sea Grant Institute under grants from the National Sea Grant College Program, National Oceanic & Atmospheric Administration, U.S. Department of Commerce, and from the State of Wisconsin. Federal grant no. NA90AA-D-SG469, projects A/AS-1, A/AS-29 and C/C-1.

WISCU-H-98-002
August 1998


Sea Grant
University of Wisconsin