A Berry Fine Legacy

WISCONSIN FARM FAMILY PRODUCES CRANBERRIES THROUGH THE GENERATIONS
Aquaculture is a growing industry in Wisconsin, with state research and development helping this already successful sector thrive. The state has a long history in aquaculture, starting with its first fish farms established more than 100 years ago.

Wisconsin is known nationwide for its excellence in dairy, and local farmers keep animals healthy and help dispel myths about the industry.

A four-generations-strong farm family legacy, the Habelman Brothers Company grows and packs high-quality, fresh Wisconsin cranberries.
Wisconsin has a long history in aquaculture, starting when the state’s first fish farms were established more than 100 years ago. Today, there are 2,587 registered fish farms in the state. Close to 300 of those are considered large commercial-scale farms – a clear indicator of the industry’s continued success.

“I think you can view the longevity of some of the state’s trout farms that have been in business for 50 to 100 years as success. Also, we’ve seen new businesses in the state raising and selling types of fish that, while familiar, have not been raised in the Midwest before,” says Dr. Chris Hartleb, professor of fisheries biology at the University of Wisconsin-Stevens Point. He is also the director of the Northern Aquaculture Demonstration Facility.

Hartleb points to Northside Enterprises, which raises walleye; Aqua Terra Farms, which raises Arctic char; and Superior Fresh, which will soon be raising Atlantic salmon, as recent successes. He says research by UW-Stevens Point in new Midwest cultured fish has also spurred production of these species.

“The newer species, such as walleye, Atlantic salmon and Arctic char, are growing very well in recirculating aquaculture systems that emphasize water reuse, conservation and high density fish production, and show great promise for expanding the Wisconsin aquaculture industry,” Hartleb says. “UW-Stevens Point and its Northern Aquaculture Demonstration Facility and Aquaponic Innovation Center have had great success with tilapia and walleye in aquaponic systems.”

Where aquaculture refers to
Nelson and Pade Inc. is helping lead the way in the Wisconsin aquaponics industry.
the farming of fish under controlled environments, aquaponics goes one step further, using the fish waste to supply nutrients for plants grown hydroponically that, in turn, purify the water.

Hartleb explains that research shows when a protein crop like fish and a vegetable crop are raised together in a closed, water-based recirculating system, chances are the system will increase fish production. This method can also open up the possibilities of the species of fish – with the value-added byproduct of fresh, locally produced vegetables. The university’s Aquaponics Innovation Center is also focusing on crop species diversification, energy efficiency, food safety and the microbiology of aquaponics.

SUCCESSFUL SYMBIOSIS

While the aquaponics industry in Wisconsin is small compared to aquaculture, the production method has gained a foothold due to the demand for quality, locally grown food. Aquaponics, combined with controlled environment agriculture, allows a grower to sustainably produce both fish and vegetables year round.

“In Wisconsin, there is a need for fresh, nutritious food, and both new and established aquaponic farms are helping to fill this demand,” says Rebecca Nelson, co-founder of Nelson and Pade Inc., a leader in aquaponics based in Montello. “Most aquaponic farms in Wisconsin are raising tilapia and fresh vegetables and distributing to local markets that include grocery stores, restaurants, farmers’ markets, schools and institutions.”

Nelson says nearly any vegetable crop can be grown using aquaponics, including tomatoes, peppers, cucumbers and many more. For commercial production though, most growers focus on fast-growing leafy crops like lettuces, kale and herbs. Nelson and Pade even grows tropical fruits, such as bananas, limes, lemons and papaya, in its demonstration greenhouse.

Nelson says the company’s patented clear flow aquaponic systems with ZDEP (zero discharge/extra production) produce significantly more food more efficiently than traditional aquaponic systems. She says the development of these systems, along with research taking place at the UWSP Aquaponics Innovation Center, is helping aquaponics grow into a profitable industry.

Both the aquaponics and aquaculture industries have been aided by the Aquaculture Industry Advisory Council, a collaboration between the Wisconsin Department of Agriculture Trade and Consumer Protection and the Wisconsin Aquaculture Association. The council provides a forum for producers to work with state and federal agencies to identify and address industry economic and environmental issues. With prominent industry leaders and research in Wisconsin, the state is poised for a bright future in aquaponics.

HELPING KEEP FISH HEALTHY

To have healthy aquaculture and aquaponics industries, fish need to be kept healthy, too. Dr. Myron Kebus, a veterinarian with the state Division of Animal Health, is helping guide farmers to do just that.

“It can be as simple as talking to fish farmers with fish health problems and advising them how to proceed, or where to find a fish veterinarian,” he says.

He also directs a program that registers fish farms and develops fish health requirements to move fish from one farm to the next, as well as into state waters or other states.

Wisconsin has trained more veterinarians than any other state in fish farm medicine, Kebus says. He trains other veterinarians to issue fish health certificates.

“Wisconsin has trained over 300 veterinarians – not only from Wisconsin, but also from virtually every state that receives fish from Wisconsin,” he says.

– Teree Caruthers