

No Appointments  
**NO WAITING**

Monday-Thursday: 7 am-7 pm  
Friday: 7 am-5 pm  
Saturday: 8 am-12 noon

bellin health  
**FAST CARE**

311 N. 3rd Avenue | Sturgeon Bay, WI | bellin.org

» **SPORTS**

# GOLF UP TO PAR

Local high school teams ready to tee it up for the season » **B1**

April birthstone is Diamond  
Half off all in stock diamond pendants!!

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# Door County Advocate

PART OF THE USA TODAY NETWORK

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## D.C. IN THE NEWS

STURGEON BAY

### Principal at St. John Bosco wins award

Vickie Dassler, principal and administrator at St. John Bosco Catholic School, was awarded Administrator of the Year by the Wisconsin Educational Media & Technology Association. Dassler was recognized March 20 for her leadership to grow and expand the digital capabilities of the school's technology, creating a strong library media program that promotes digital literacy and enhances students' learning.

SISTER BAY

### Volunteers sought for Sister Bay spring clean-up

Volunteers are needed to help with the outside clean-up around Scandia Village Good Samaritan at 9 a.m. April 22.

It is an opportunity for students looking to fulfill community service hours needed for graduation or for local clubs to help the community, according to a news release from Scandia Village.

A free picnic lunch will be provided at noon prepared by the members of the Kiwanis Club of Northern Door County. For more information, or to volunteer, call Nicki Sharig at 920-854-2317.

STURGEON BAY

### Flag-raising ceremony Wednesday at hospital

The Door County Medical Center and The BloodCenter of Wisconsin will host a flag-raising ceremony at 11 a.m. Wednesday at the main entrance to the hospital. The event is to honor National Donate Life Month, according to a news release from Door County Medical Center.

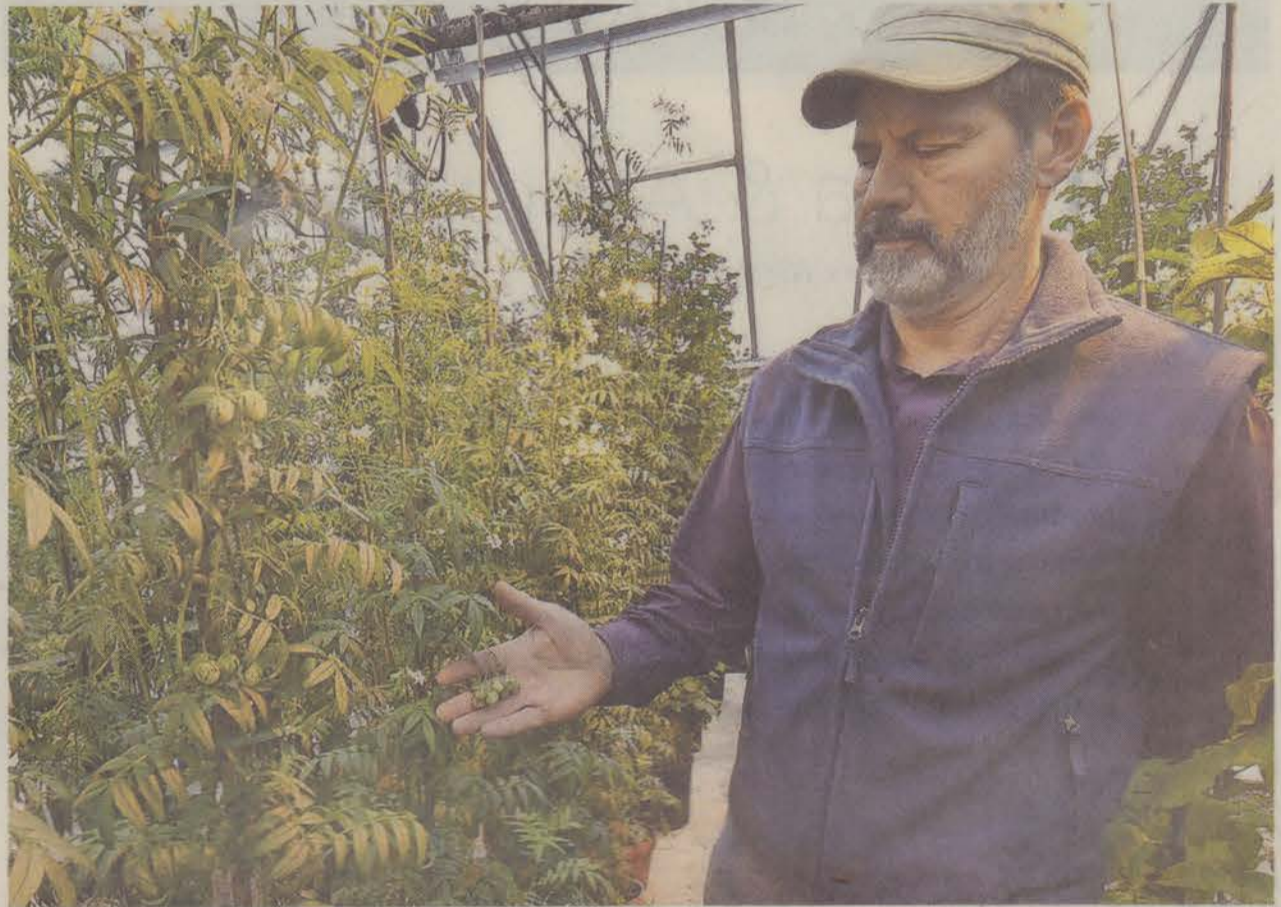
STURGEON BAY

### Registration opens for Crossroads Trail Run

Registration is open for the eighth annual Crossroads Trail Run/Walk 2k, 5k, 10k on June 24 at Crossroads at Big Creek.

The trail run is at the 200-acre preserve at Crossroads at Big Creek Learning Preserve in Sturgeon Bay. It is a chip-timed event for all ages, all levels of runners and walkers. Register online to [www.CrossroadsRun.com](http://www.CrossroadsRun.com).

## Sturgeon Bay holds seeds for the world



TINA M. GOHR/USA TODAY NETWORK-WISCONSIN

U.S. Potato Gene Bank director John Bamberg says the seed pod or potato fruit is the desired way to collect seeds from the potatoes for propagation. The potato bank holds the world's largest collection of potato seeds inside its headquarters at UW Peninsular Agricultural Research Station in Sturgeon Bay.



TINA M. GOHR/USA TODAY NETWORK-WISCONSIN

Charles Fernandez uses a half of a gel capsule to collect pollen from a male plant and dips the stigma of the female flower into the capsule to complete the pollination.

LIZ WELTER

USA TODAY NETWORK-WISCONSIN

STURGEON BAY - If a repeat of the Great Potato Famine was to strike or climate change so altered the Earth that water became scarce, potato seeds from the U.S. Genebank on the outskirts of Sturgeon Bay will provide the solution to a looming food crisis.

While that seems far-fetched or outlandish, it's not. A potato fungus about 15 years ago threatened crops around the nation. Potato seeds from Sturgeon Bay were among the tools used to avert a potato crisis. The fungus, called late blight, was a variation of the disease that caused the Great Potato Famine leading to

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"In a world where the climate is changing, potatoes are an adaptable crop."

JOHN BAMBERG  
PLANT GENETICIST WITH  
THE USDA



WILD DOOR

[www.doorcountyadvocate.com](http://www.doorcountyadvocate.com)

# Sturgeon Bay holds seeds for the world

Liz Welter, USA TODAY NETWORK-Wisconsin 5:30 p.m. CT April 14, 2017



(Photo: Tina M. Gohr/USA TODAY NETWORK-Wisconsin)

**STURGEON BAY** - If a repeat of the Great Potato Famine was to strike or climate change so altered the Earth that water became scarce, potato seeds from the U.S. Genebank on the outskirts of Sturgeon Bay could provide the solution to a looming food crisis.

While that seems far-fetched or outlandish, it's not. A potato fungus about 15 years ago threatened crops around the nation. Potato seeds from Sturgeon Bay were among the tools used to avert a potato crisis. The fungus, called late blight, was a variation of the disease that caused the Great Potato Famine leading to failed crops and starvation in Ireland and parts of Europe from 1845 to 1852. It also caused mass migration to the United States.

Geneplasm, or potato seeds, from the Sturgeon Bay facility were used to develop a potato immune to the new form of late blight, said John Bamberg, a plant geneticist with the USDA/Agriculture Research Service and project leader of the U.S. Genebank. The genebank is located at the Peninsular Agricultural Research Station along State 42.

"For years we knew that there was a Mexican species that was resistant to late blight, and researchers had been working on it using seeds from our genebank," Bamberg said.

When it was discovered that the new form of late blight was resistant to sprays used to control the fungus, researchers went into action to develop a potato variant based on the Mexican plant that was immune.

"A lot of people don't know about the important work being done right here in Sturgeon Bay," Bamberg said.



**U.S. Potato Gene Bank program manager Max Martin transfers tissue plants from cuttings for propagation.** Tina M. Gohr/USA TODAY NETWORK-Wisconsin (Photo: Tina M. Gohr/USA TODAY NETWORK-Wisconsin)

In the greenhouses at the U.S. Potato Genebank along State 42, lush green tendrils of potato plants reach toward the grow lights. The mature plants sprout pods the size of walnuts that yield valuable pin-head-size seeds.

These seeds hold the clues for scientists seeking answers to a wide range of topics, including higher yield, drought-resistant and pesticide-free potatoes. The world's largest collection of potato seeds and cultivars are housed at the U.S. Potato Genebank, representing more than 5,000 potato varieties and species.

Potatoes can grow almost anywhere, need less water than most food sources and are packed with nutrients, antioxidants and minerals, Bamberg said. Researchers around the world are working to develop new potato strains to feed burgeoning populations in areas where the soil is poor and the climate is cold, hot or dry.

"In a world where the climate is changing, potatoes are an adaptable crop," Bamberg said.

Potatoes are a super-food, Bamberg said. There are not many food sources as easy to cultivate, with the same tastiness and provide similar nutrient and mineral benefits as potatoes, he said.

Recently scientists at a facility in Peru that partners with the Sturgeon Bay site completed experiments where they successfully grew potatoes in a climate similar to Mars. In the popular 2015 movie, "The Martian," an astronaut stranded on Mars survives by growing potatoes.

Growing potatoes in an adverse climate like Mars demonstrates the potential for potato crops, Bamberg said.

"It's similar to climate change where what you used to grow, you can't anymore, so maybe potatoes are the answer," he said. "Potatoes are already an important food crop, and as the climate is changing, there's a need to meet the new challenges in growing the crop."

They also are the most widely grown and consumed vegetable in the nation with a value of \$4.3 billion and exports totaling more than \$1 billion. In the world, potatoes rank behind wheat, rice and corn in consumption.

China is quickly surpassing the United States in potato production and India is not far behind, Bamberg said.

Vast varieties of potatoes, many developed with geneplasm from Sturgeon Bay, are being cultivated across Asia, India and into Southeast Asia.

"These countries have large populations, and they need to feed their people," he said.

The genebank's goal is to help researchers and breeders innovate improvements in the potato crops, said Tina Wagner, a lab technician who maintains the facility's collection.

Through genetics, the opportunities to develop potato crops with certain traits is significant. The genebank specializes in providing to researchers the seeds or germplasm that have traits a scientist requires to develop certain characteristics in a potato, Wagner said.

"We have a job to do, and one of those things is filling the orders," Wagner said.

While the majority of the research is U.S. based, Wagner has shipped geneplasm to far flung places such as the University of Inner Mongolia.

"There's a lot of research going on all over the world," she said.

The Sturgeon Bay genebank was founded in 1948 by Wisconsin potato growers who saw the value in a centralized location to store seeds and house research to develop better potato stock.

Every year Bamberg and other researchers scour the sites where wild potatoes grow in the Western Hemisphere. While the wild potato originated in the region along the intersection of Peru and Bolivia, new wild varieties continue to be found in the southwestern section of the United States.

Wild potatoes, many of which are inedible, carry a treasure-trove of genetic diversity for potentially useful traits to develop new varieties of potatoes, Bamberg said.

"It's those genes from the wild potatoes. You never know what you could find," he said.

Potato gene research has found properties in wild potatoes that could affect cancer, diabetes and obesity. There also might be benefits in potatoes to minimize the effect of lead poisoning on children, he said.

"The research being done using geneplasm from Sturgeon Bay isn't just about growing a better potato. It's also about helping the world," Bamberg said.

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