

Bringing Research to LIFE

In Brief

Chat with Researchers

Heart attacks are the leading cause of death in Canada. Learn from the experts about how you can keep your heart healthy at an upcoming Café Scientifique.

The café, dubbed *Keeping your Ticker Happy: Strategies for Heart Health*, will give the public an opportunity to chat in a laid-back setting with top researchers in the field: Todd Duhamel (Faculty of Kinesiology and Recreation Management), Davinder Jassal (Faculty of Medicine), Grant Pierce (Faculty of Medicine), and Carla Taylor (Faculty of Human Ecology). All four professors are affiliated with research partner St. Boniface Hospital Research Centre.

The free public event is scheduled for Thursday, Feb. 25 at 7 p.m. at McNally Robinson Grant Park.

Upcoming

Workshop:

Collaborative Health Research Projects for NSERC and CIHR Researchers

Monday, March 8, 2010

9:30 AM - 11:00 AM

Room S211

Medical Services Building

2nd Floor

Bannatyne Campus

RSVP by March 3, 2010 to
gouldd@cc.umanitoba.ca

Bringing Research to Life Speaker Series:

HIV Vaccines: The Frustrations and the Hope

Wednesday March 17, 2010

7:00 PM

Room 290

Education Building

FREE ADMISSION

For more information call 474-9020

Protecting Lake Winnipeg

Phosphorus expert to give public presentation



Photo by Katie Chalmers-Brooks

Researcher Don Flaten (left) and technician Anthony Buckley from the Department of Soil Science are part of a U of M team working with phosphorus.

BY KATIE CHALMERS-BROOKS

Think back to summertime and basking in the sun on the shores of Lake Winnipeg. As the temperature rose so too did the temptation to go for a dip but the green slimy goo at the water's edge made you think twice.

Ever wonder how that pea-soup-like sludge – known as algae – got there in the first place? One of the culprits is phosphorus.

Our relationship with this nutrient is complicated, explains soil scientist Don Flaten, who will be giving a free public presentation on the topic Feb. 24 for the *Bringing Research to Life Speaker Series*.

We need phosphorus in our soil to grow crops and in our water to sustain fish but too much can cause big problems. An overload creates algae, which depletes the oxygen in the water as it decomposes and essentially suffocates the fish, which in turn wreaks havoc on our aquatic eco-systems.

"There is a variety of steps that government, industry and private individuals are taking to reduce the risk of overloading the lake but we haven't had substantial progress yet in reducing the loading itself," says Flaten, a nutrient management specialist in the Faculty of Agricultural and Food Sciences. "I think we have yet to turn the corner on phosphorus loading in Lake Winnipeg."

We get a surplus of phosphorus in runoff water – which eventually ends up in the lake – from inside and outside Manitoba, from urban centres, natural lands and farmers' fields. The runoff contains phosphorus from soil, plant material, fertilizers, and human and animal waste, explains Flaten, one of 14 members belonging to the Lake Winnipeg Stewardship Board.

The provincial government's efforts so far have included calling for improved sewage treatment in Winnipeg and restricting farmers' use of livestock manures and synthetic fertilizers. The Board made recommendations to the Province in 2006 on how to improve the health of Lake Winnipeg and will soon release another report on how those recommendations have been carried out.

Flaten says we need to find ways to reduce the risk of phosphorus loss to surface water. Recent research by the professor and his colleagues indicates Manitobans shouldn't be tackling the issue the exact same way experts do elsewhere in the world. The landscape, climate and soils of the prairies are unique and require a different approach, he says.

Here in Manitoba, our flat terrain and cold, dry climate mean that most of the phosphorus in runoff is not caused by soil erosion or heavy summer rainfall, as it typically is elsewhere. "Our phosphorus losses are not dominated by erosion of soil particles during summer rainfall. Instead, for the most part it's

the runoff of dissolved phosphorus during snow melt," he says. "Therefore, the traditional practices of erosion control are not likely to significantly reduce phosphorus loading into Lake Winnipeg, and in fact, in some cases these erosion control practices may backfire and increase phosphorus loading."

For example, Flaten says recent research done by the University of Manitoba and other partners in the province's South Tobacco Creek watershed shows that using zero-tillage to reduce erosion on farmland has the potential to increase rather than decrease phosphorus loss.

"So, given the challenges of preventing or intercepting dissolved phosphorus after it starts moving, prairie farmers may need to be extra careful to avoid the build-up of excess levels of phosphorus in their fields in the first place," Flaten says.

U of M researchers are exploring phosphorus from several angles, including: how freezing and thawing of soil and vegetation affects phosphorus loss; how to feed livestock to make more efficient use of phosphorus; how to remove phosphorus from livestock manure; and how to better test soils to predict the amount of phosphorus that can run off into water bodies.

To learn more, join Flaten Wednesday, Feb. 24 at 7 pm in Room 290 in the Education Building for his presentation *What's the Fuss about Phosphorus?*