

The power of peat

A natural solution for industrial waste water

Many industrial processes require water for heating, cooling, cleaning or rinsing. But before the water is discharged and returned to surface waters, it has to be treated—typically with chemicals.

NRRI chemist Igor Kolomitsyn (shown right) is developing a way to enhance the natural ability of peat to attract and store toxic heavy metals to treat industrial waste water. Even better, he's working with a small peat company based in Aitkin, Minn., to expand their product line with environmentally friendly water treatment solutions for heavy industry.

NRRI's chemistry research and American Peat Technology's marketing and industry know-how is an ideal partnership. And it's what NRRI was established to do: help Minnesota's natural resource-based businesses grow and thrive in an environmentally sound manner.

"Being a small company, NRRI provides us with chemical research that we just don't have the resources to accomplish ourselves," said



American Peat's President, Doug Green. The company does about \$3.8 million in sales annually with about 15 employees. "We get short term access to high caliber chemists allowing rapid product development and early entry into the marketplace."

For Kolomitsyn, the arrangement allows him to focus on

chemistry, leaving the business-end to the business people.

"I have the idea for this product, but I don't have time for market research," said Kolomitsyn. "If I spend time on that, I'm not a chemist anymore.

American Peat is in the best position to move it forward."

Peat is partially decayed vegetation that accumulates in wetland bogs, and about 15 percent of Minnesota is covered with this valuable resource. Minnesota's peat industry—mostly harvesting and packaging for horticultural purposes—provides about 200 jobs in rural areas where

work can be scarce. American Peat, founded in 2003, develops environmentally beneficial products that can replace chemicals for agricultural and remediation purposes.

"I've had a whole lifetime in the business world and I've developed an ability to see market potential," said Green. "But our labs are under Igor's direction. He's part of our team and he gives credibility to the research. We're very quick to incorporate what Igor comes up with."

No sooner had the ink dried on the partnership agreement when

two customers came knocking – Freeport-McMoRan, one of the world's largest copper and gold producers, and the Soudan Mine in Tower, Minn.—both of which are interested in this low cost way to remove dissolved heavy

metals for wastewater treatment.

"One of the reasons our business is growing is because the organic market is growing," said American Peat CEO Tom Eberhardt. "We feel strongly that, working with Igor and NRRI, we can continue to develop peat-based products that are good for the environment."



More about American Peat Technology

In the heart of Minnesota's boggy, sedge peatlands, American Peat has developed two forms of microbe carrier products that are beneficial to growing crops while reducing the need for commercial, nitrogen-based fertilizers.

Granulated BioAPT can be inoculated with bacteria that are beneficial to crops. Among its many benefits, the peat granules resist moisture loss and provide a stable environment for organisms. The company is the

only supplier of this product to the Rhizobia industry.

Rhizobia is a naturally occurring organism that lives in a symbiotic relationship with legume crops like soybeans, field peas and lentils, reducing the need for commercial, nitrogen-based fertilizers.

They also produce a finely ground BioAPT product that is used as a seed coating. The small particles allow for

strong cohesiveness to bind directly to seeds. Rhizobia living on the attached peat benefit the root system as soon as it sprouts.

"We have as many as 50 research projects going on right now with peat," said American Peat CEO Tom Eberhardt. "Our peat products are an ideal life support system for organisms, and we can deliver a high quality, consistent and reasonably priced product."