

Fish food from beer?

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FORT COLLINS - An unlikely alliance between two former Colorado School of Mines students and the New Belgium Brewery in Fort Collins could someday end up saving fisheries all over the world.

At least that's the vision of a handful of entrepreneurs working in a sludge treatment warehouse about a quarter mile in back of the famous brewery.

Andy Logan, who has a PhD in water treatment, explains that fisheries around the world are in a state of collapse.

Even replacing dying fisheries with commercial aquaculture has a way of backfiring, because lower grade fish have to be harvested from the oceans to feed to artificially grown fish.

"Fish eat other fish," Logan says. "The aquaculture industry sends ships out to catch non-food grade fish species and

those are ground up into fish meal. But this source of fish meal is more and more limited. The production is maxed out."

Logan and fellow PhD, Seth Terry, began doing some brainstorming on how they could use their training at the School of Mines to solve the problem. They created a company called 'Oberon FMR'. The FMR stands for 'fish meal replacement'.

"It was just back-of-an-envelope brainstorming. What we've done is come up with a way to make a high protein fish meal using sludge that comes from breweries," said Logan.

Breweries have long faced a problem in properly disposing of waste materials that come from brewing hops and barley. Much like a sewage plant, breweries have to have large settling ponds to treat the sludge.

"Large brewers spend 200 dollars a ton to dispose of this material. We can get that material for free, and using a new bacterial process, we can process 18,000 tons a year of fish food. Nothing like that has ever been done before," Logan said.

"A large facility, a large brewery for example, might put 40 to 50,000 pounds of waste beer down their drain every day. So we can convert that to 30 to 35,000 pounds of bacterial protein everyday. Regular fish meal has 40 percent protein. Ours has 65 percent protein."

The two scientists proposed developing a pilot project using a waste stream from New Belgium Brewery.

"They loved the idea. They're very green-minded," Logan said.

The beauty of the idea, according to Logan, is that they don't have to build much new equipment to create large quantities of the new fish food.

They say with the addition of a commercial centrifuge and an oven, they can retrofit existing sludge treatment plants for a small amount of money.

The project has gotten the attention of some venture capital, and a much larger facility will be built this year someplace in the eastern part of the country.

"We have three places we're looking at right now," said Logan. "We can have a large scale operation up and running in six months."

"We are in the testing phase in Hawaii and Peru right now, and the University of Idaho is going to be testing our fish food next year."

If the two scientists ultimately end up solving two major environmental problems, fish, fishermen, fish-eaters, and brewers all over the world should be very happy.

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