

Investors' next Holy Grail – microbial seed treatments; The technology will allow farmers to cut fertilizer use in half while boosting yields

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Boston -There is a strict dress code required to enter the elite Harvard Club of Boston, where a portrait of JFK, under a soft light near the entrance, states he became a member in 1946.

But if you're David Perry, who founded Indigo Ag several years ago, based here in Boston, and you handle \$400 million U.S. of others people's money to finance your revolutionary microbial seed treatment technology and research, you can give your speech in blue jeans and a shirt.

He was complimented by an investor in the Q and A after for having, "jaw-dropping chapuza" of "using other people's money to take risks."

Microbial seed treatment will, "halve the use of fertil-izer" with no yield drop, and probably an increase in productivity and yields, predicted Perry, who was speaking here at the AgTech Nexus Conference.

Starting a decade ago, big money investors in farmland and ag technology and cutting edge researchers in agriculture have been invited by this group to meet and network in major cities around the world, with this summer's session being held in Boston.

Bill Gates has a representative here, two ladies speaking on a panel handle \$200 million each in their agriculture portfolios, there is a significant sprinkling of Chinese and other languages being spoke around the coffee tables, among this well dressed audience of only a few grey hairs.

It takes the price of two dairy cows to register for this event, if you include the baseball game later that night at Fenway.

It's only since the cost of DNA sequencing has plummeted in the last half decade, "that you can make microbial discoveries on an industrial scale," said Perry.

"There are probably about a trillion microbials," not only in the soil, but especially in the plant, 'that only now we can start sequencing," he said.

"Microbes in plants is a great place to be," he said.

The fact that this technology has such dramatic potential and is in the starting stages has attracted a lot of top researchers and financiers to his company, said Perry.

"Smart people like a mission."

Posted on internal media site of the Ontario (Canada) Farmer publication.

The traditional method of testing crops and seed varieties on small plots of land around the countryside was problematic in gathering accurate data. It is too slow and limited when you are dealing with investors wanting a return, said Perry.

"GMOs and chemistry takes so long," he said. "We didn't have that time and we give a return based on risk and reward."

Hence a different model needed to be set up, working directly with farmers in a structure that made it more profitable for them, and using their on farm data on way more acres, he said.

They started with microbetreated seed with 72 American cotton farmers with 50,000 acres five years ago. They provided the seed with the microbes and paid a premium per bushel as well as provide an on-the-ground agronomist.

In 2018 the crop varieties have expanded under the same model and "we'll be at 10 million acres at the end of the year," said Perry.

Other crops they are now testing around the world with cooperating farmers include corn, wheat, soybeans and rice.

Of the original 72 cotton farmers, 70 are still buying microbial seed. "The other two had relatives selling seed," quipped Perry.

The farmer pays 10 to 15 per cent more for their seed, but with significantly less fertilizer and "selling more bushels," repeat and rapidly increasing customers are the norm, he said.

One large cotton farmer from Arizona, who waved his hand for a question, wondering exactly how it all worked, was verbally signed onto the program by Perry.

Indigo is also becoming involved in helping farmers change and improve the whole agriculture value chain, which has them "stuck in the middle," buying their inputs from a few multinationals and selling their products to a few multinationals, said Perry.

"The elevator system is 100 years old," based on a railway system and a few multinational buyers, he said.

"Farmers can now store onfarm and deliver directly to the customer," said Perry.

But they have to be smart about it and know that "consumers and buyers will pay to have their needs met," he said. He used the example of a 10 million wheat bushel facility in Kansas, which is paying a 43 cent a bushel premium to have it grown a specific way.

"The farmers won't do it in Kansas, so they are importing wheat," said Perry.

This microbial technology will be disruptive for some, predicted Perry. "There is going to be a lot less fertilizer used"; seed companies will have to change their technologies and business models, he predicted.

"Companies that are not going to align where the world is going are going to suffer," said Perry.