

GERMINATION

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PROVIDING Cost-Effective SOLUTIONS

How to Be
"In the Know" on
Changing Trends

TAKING the HELM

Crosby Devitt leads the
Canadian Seed Trade
Association with innovation
and collaboration top of mind.

Demand for Biologicals Means SCALING UP

NICHE VARIETY
Finds Home in New
Wheat Class

Meet **CSGA'S** New
EXECUTIVE DIRECTOR

A Collective Approach to
Science Communications



DRIVING INNOVATION, CREATING UNIQUENESS & DIFFERENTIATION

With a “Go Green” mentality that’s pro-environment, XiteBio’s Manas Banerjee looks to drive innovation with the company’s microbial technology for use on a variety of crops in Canada, the United States, Europe and South America.

“Every product development avenue — be it inoculants, biofertilizers, additives or plant growth regulators — that we research must be innovative, or we will not pursue it,” says Banerjee who serves as president and chief executive officer. “We’re looking to create innovative efficacious product lines that benefit farmers’ bottom line.”

Despite only being in business for six years, XiteBio has pushed the boundaries and launched two innovative product lines, inoculants using the Advanced Growth Promoting Technology (AGPT®) and early post-emergent biologicals using Plant Growth Promoting Rhizobacteria (PGPR).

Designed for use on soybeans, peas, lentils and faba beans, Banerjee explains that the AGPT powered premium liquid inoculants invigorate native soil microflora and promote synergies between the introduced and native microbes.

“This unique technology is a revolutionary change in thinking for the industry and farmers,” Banerjee says, explaining that different soil types support different microflora, many of which benefit crops.

For instance, did you know that one gram of soil could have more than 1 billion bacteria, more than 100 million actinomycetes, 100,000 to 1 million fungi, and up to a million algae? That doesn’t even include the protozoa, nematodes, earthworms and other invertebrates.

“These native microbes living in the soil are stimulated by AGPT®, and all of these organisms then work together, benefitting the crop.

“It’s our ability to create synergies between rhizobia inoculants and the invigorated microflora that’s revolutionary.”

SoyRhizo® and PeasRhizo are two of the products that have been developed as a result of creating uniqueness and differentiation in the traditional inoculant market.

These new products don’t only stimulate the microflora in the soil, but the rhizobium in the inoculant also have a longer life, both on the seed and on the shelf. Once applied to the seed, the SoyRhizo® has a life of up to 64 days with seed treatments and on the shelf, a two-year life. The PeasRhizo has a one-year life on the shelf and up to 48 hours on the seed.

Banerjee adds that with these new innovative formulations, farmers can now enjoy inoculants that are user-friendly, require little volume of liquid and dry quickly with on-seed application, which reduces bridging in the planter.

“Think of it as an all-in-one formulation,” he says.

So what does all this mean besides being different and easier to handle? Research trials show improved soil health, as well as healthier, more vigorous crops and higher-yielding crops. The average yield increase for SoyRhizo® has been five bushels per acre, or about 10 per cent, in our trials from 2011 to 2013. But Banerjee says his team has witnessed yield increases as high as 26 bushels per acre. And the average yield increase for PeasRhizo is 4.1 bushels per acre, or about 19 per cent.

A NEW FAMILY OF BIOLOGICALS

XiteBio’s other big innovation is the patented PGPR platform, which produces biologicals.

When the biggest players in the agri-inputs industry invest billions of dollars into initiating and diversifying their biological innovations, you know there will be new technologies emerging in an expanding marketplace.

— Dr. Manas Banerjee, President and CEO of XiteBio Technologies, Inc.



Banerjee explains that these PGPR biologicals play a major role in the transformation of nutrients, converting them to more plant available forms. They also produce plant hormones, stimulating earlier initiation of roots and boosting root and shoot development. Furthermore, organic acids and siderophores are also produced to stimulate uptake of phosphorous and iron. They can fix atmospheric nitrogen for many crops, not just legumes.

These biologicals are designed to be applied early post emergence. Based on its PGPR platform, the company has developed a Yield+ family of products.

It’s innovations such as PGPR and AGPT® that allow farmers to increase yields and improve soil health while using fewer chemicals. These goals are at the heart of XiteBio’s mission and it’s clear that company is delivering the technologies and products that will move agriculture forward.



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