

Precision Nutrient Management

FBS Offers Product That Will Ease Fertilizer Uptake And Efficiency

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Floratine BioSciences, Inc. (FBS), an agricultural technology company, is committed to helping growers achieve optimal plant strength and performance through innovative, scientific principles, according to Brian Good-

win. “We’re across Canada as well,” Goodwin added. “Of course, we’re in Argentina, four countries in Europe and very heavy in Australia. This is a global initiative.”

“And it’s science based,” Bradley added. “We’re not just out here selling another snake oil product. We will have the research to back it up. We’re on a fast track to get that research.”



Brian Goodwin, CEO of Floratine BioSciences of Collierville, Tenn., speaks about their NPK enhancement products. Photos by John LaRose

win, CEO of FBS of Collierville, Tenn.

The company’s NPK enhancement products, Carbon Boost-S and KAFÉ-F, increase the uptake efficiency of fertilizers, as well as other secondary micronutrients using only six to eight ounces per acre.

The business began initially with a focus on a technical platform from the golf course industry. That included intensive management, diagnostic consulting and problem solving.

The golf turf business grew to 43 countries as Floratine Products Group. Goodwin was the co-owner when he and his partner sold it to a management group in order to start FBS.

This is FBS’s first complete year in corn, soybeans and cotton. However, the company has done plenty of peripheral work with those crops the last two years.

“This year we’re going to spend more than \$1 million on R&D and, regardless of how you look at it, we have a tremendous investment in R&D now on primary crops,” Goodwin said.

The research program was underway before Bradley joined the company.

“They had a researcher, he’s still on staff though semi-retired, but we retained him,” said Bradley. “He handles the northern, north central area, and that gives me a breather. He’s



Director of Research and Development, Dr. John Bradley, explains the research isn’t restricted to corn and soybeans, but extends to other high value crops.

“We had developed a very strong agronomic consulting type model, with a lot of specialty products to solve specific, usually stress related issues,” he said. “We specialized at the very high end of the golf industry – US opens, Roger cups – usually quite affluent high standard golf courses.”

The agricultural effort began as a pilot project in 2003 and the results and data were significant enough that Goodwin felt he should focus the new company in that direction.

“We started this business (FBS) after four years of research in California on specialty crops,” Goodwin continued. “We decided to attack the golf greens of agriculture, the niche ultra high value specialty crops – certain vegetables, stone fruit, prime crops like almonds, walnuts, really high value.”

By way of natural evolution, the agriculture business began with a focus on specialty crops, and then moved into corn and soybeans.

“John Bradley (director of research and development at FBS) came on with us and we set ourselves up to pursue specialty agriculture, and it was about that time that our research came in from 2006,” he added. “We had quite significant research and results on corn, wheat and soybeans – and then the world turned. We woke up one day and they were high value crops and we saw the ability to leverage into that sector, especially with the cost of inputs.”

The research shows the company’s products can assist farmers with nutrient delivery efficiencies. Utilizing a revolutionary nutrient delivery technology called CarbonPower®, FBS products enable plants superior absorption and utilization of the nutrients needed to increase yield and withstand environmental stresses. That results in higher yields, improved crop quality, higher profits – and these products are eco-friendly. They improve resource productivity and reduce impact on the environment, providing positives for the grower and the ecosystem.

“I think the day of simply planting more acreage or using more nitrogen or phosphorous or potassium to increase yields is over,” Goodwin said. “It’s over economically, and ecologically as well. So we have a new set of dynamics in commodity crop production in today’s world. What we’ve brought to the table is a new standard or level of efficiency in nutrient delivery and that comes from more effective management of the nutrients.”

In layman terms, FBS is adding a technology or product to the NPK to make it work better both from the ability to be absorbed into the plant and then, once it’s in the plant, to move effectively throughout the plant.

The research is focused on what Goodwin refers to as CarbonPower®. Scientists have identified, isolated and ultra-refined a naturally occurring complex of organic compounds that are exceptionally active in the presence of essential plant nutrients. These compounds encourage nutrient uptake, respiration and enzyme driven responses to consistently produce higher yields and improve crop quality. These actions allow plants to obtain and utilize the nutrients they need so they are stronger, healthier and more prepared to withstand environmental stresses.

“We have a proprietary license for the technology from Europe on a global basis for agriculture,” he said. “We started working with it almost 10 years ago in my previous golf company, we brought it to agriculture and, after three years of intensive work in California, Dr. John Bradley agreed to come on board and drive our R&D department.” Goodwin said. “Since then we’ve built a very strong R&D team around John, with different talents to take us to everything from replicated third party independent research, to major universities, to grower trials.”

Bradley said he’s working with the University of Tennessee, University of Michigan, Ohio State, UC-Davis and the University of Georgia. Research isn’t restricted to corn and soybeans, but extends to other high value crops such as fruits, nuts, vegetables.

“However, we’ve refocused, and real early this year before the crops went in we began several tests in corn, a few in cotton, soybeans, and rice,” Bradley added. “We also use third party independent contractors, including Don Howard formerly of Milan who is now retired. He’s doing an NPK and a nitrogen study with us. Other independent researchers are scattered in Wisconsin, Michigan, Iowa and California. We’re probably one-third university and two-thirds independent, and then we’re doing a lot on the farm. We’ve got over 150, probably close to 200, grower field trials.”

These trials are located heavily in the midwest, southeast and West coast.

managing 11 or 12 research projects.”

“Before we came into this situation, we were selling probably close to \$4 million retail a year into California, selling direct in the beginning as part of our validation project,” Goodwin said. “Then we went to conventional distribution on the West coast with the IAP group, which is a large group of independent dealers who will put about \$4 million to \$5 million retail this year primarily into California and the northwest in a variety of specialty crops. We’re on a pretty fast growth track, but the major push into Midwestern, and Southeastern agriculture will occur this coming year in 2009.”

Bradley added that a grower last year in Michigan bought the product for 16,000 acres.

“He started with about 1,000 acres of corn and when he ran his combine across the field, he ended up with 24 bushels above normal yield,” Goodwin said. “So this year he used the product on his entire 16,000 acres. We’d like every story to be like that, of course, but he’s an example of those aggressive, early adopters.”

FBS doesn’t claim its products will help farmers reduce the amount of fertilizer they use, it simply works to enhance the fertilizer.

“It’s going to increase the efficiency of what they’re now using,” Goodwin said. “If they choose to use less that’s their choice. Many articles focus on how inefficient NPK is. When it was dirt cheap, less than \$200 a ton, you could put as much of it out as you wanted. Now every spoonful has to count.”

Goodwin noted that last year on field corn the trials boosted average yield increases of 17.2 bushels per acre. That was with one application of one product applied at planting at a rate of 6 to 8 ounces per acre with the seeds. So the net cost to the consumer was less than \$6 an acre and his return on investment (ROI) was at times, depending on where he was, as much as 15 or 20 to 1.

“We’re seeing in corn, particularly last year, tremendous ROI, and again this year with the results just coming in we’re starting to get some good statistics,” Goodwin said.

“I’m working on eight or nine tests today and with one of the researchers we’re working with I averaged all the increases across all the tests and it went to an 8.5 percent increase in yield all the way up to 30 percent in some of them,” Bradley said. “So the average was a 16-percent yield increase.”

This was with using normal applications with FBS’s nutritional delivery system added.

“Our products are designed to be non-disruptive for the grower,” Goodwin said. “He will need no new equipment, no change in cultural practices, no special trips, there will be no compatibility problems. This technology is designed to go global and be used on any crop in any country in the world. You’re putting nutrients into the ground, then it becomes a simple issue of risk management. You can’t afford not to use technology to ensure your nutrient investment works more efficiently. In the last 40 years every aspect of agriculture has been radically improved from a technical standpoint with the exception of nutrient management.”

Bradley added that farmers are still slinging fertilizer. They’re using precision ag, they are root sampling and putting more or less of NPK on certain parts of the fields.

“We’re still basically taking the same material, the same commodity, and we’re just distributing differently,” Bradley said.

FBS’s primary product, Carbon Boost-S, is a liquid; however it can be impregnated on the grain or fertilizer.

“We’re working with a dry granular additive that can be mixed into the blender with your customized NPK blend,” Goodwin said.

Bradley said that, with corn, the product can be impregnated in the bulk fertilizer or with liquid fertilizer.

“We can put it with the starter, whether it’s a granular or liquid, we can put it in-furrow, we can put it two-by-two beside the row, we can put it sidedressed, same way with cotton and wheat,” Bradley said. “We can either impregnate it or use it with phosphorous alone or with phosphorous and potassium or with nitrogen or with all three. It’s totally non-disruptive to what farmers are already doing.”

Goodwin explained that is the soil version of the product.

“We have another version called KAFÉ-F for any kind of foliar application. Whatever is in your tank can go along with it and assist the systemic uptake,” he said.

At a cost of about \$6 an acre, the yield boost of Carbon Boost-S and KAFÉ-F make the products definitely worth it.

“We always see the positive side of it,” Goodwin said. “It’s going to pay for itself.”



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