Bionetix® Newsletter

Are You Taking Advantage of Bionetix[®] Biologicals for Cleaner Ponds and Healthier Fish This Summer?

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Owners of ornamental ponds or aquaculture lagoons can further promote the health of their aquatic species, including fish or shrimp, by adding AQUA-FEED[™] to their fish or shrimp food. AQUA-FEED[™] acts like probiotics for fish, improving feed quality and encouraging a healthier digestive and immune system for an overall healthier aquatic population. way to give a boost to pond clarity while the weather is still cool and natural nitrifiers have not awakened much yet. BCP655[™] can remove organic nitrogen (such as amino acids, proteins, purines, pyrimidines, and nucleic acids) and help with ammonia levels even in cooler temperatures like those in early spring. The microorganisms in BCP655[™] have a healthy appetite for carbon, allowing them to consume nitrogen at a higher rate than typical. BCP655[™] microorganisms can also use nitrite/nitrate for respiration when dissolved oxygen levels are low, which could easily happen in lakes or ponds that have been at a standstill for several months.

August 2019

With summer in full swing in the Northern Hemisphere and coming soon to the Southern Hemisphere, do not miss out on the important natural advantages Bionetix[®] biologicals can bring for cleaner ponds and healthier fish. Contact us today to discuss the possibilities for you and your clients! <u>http://www.bionetix-international.</u> <u>com/support/contact.html</u>



For regions in the Southern Hemisphere that will soon be coming into the spring season, BCP655[™] is a good



BIONETIX® NEWS

Bionetix[®] has had a number of exciting opportunities to spread the word about its natural biological solutions this year, especially in connection with the Latin American region.

Washington, D.C. Trade Mission

In February, Bionetix[®] joined seven other Canadian companies in an important trade mission to Washington, D.C. that brought them into contact with two major banks: World Bank and the Inter-American Development Bank.

During the course of the trade mission, Bionetix[®] teamed up with Brazilian distributor Enessul to present the exciting results of an aquaculture trial in Mato Grosso, Brazil. The trial involved testing three Bionetix[®] products—<u>BCP54[™]</u>, <u>AQUA-FEED[™]</u>, and <u>AEROBOOST-ER-O^{2[™]}</u>—in the aquaculture of "Pintado" fish over the course of about one year. The promising results included better production, healthy fish without medication, good water quality, and low waste levels that allowed the water to be reused.

The bank representatives were very interested in the project and moving forward with regional financing. Several Canadian companies attending the trade mission were also interested in the possibilities of Bionetix[®] technologies.



Cartagena, Colombia

In May, Bionetix[®] headed to Cartagena, Colombia, for a joint convention of the 62nd International Congress of ACODAL and the XVIII Congress of Region III of AIDIS. This major event for the water/environment/sanitation sector gathers some of the most important international and national representatives from business, government, and academia. With Canada being the guest country of honor, it was an especially good year to present Bionetix[®] biological solutions to the emerging Colombian market.

Bionetix[®] met with a number of important market players, including the top manufacturer of portable plastic toilets in the country and a prominent domiciliary public utilities company. The public utility is currently working on a project to reduce organic contamination from domestic waste and improve dissolved oxygen levels in a highly populated river valley drainage region that services 3.6 million people. Bionetix[®] was also pleased to connect with engineers from a beach management company interested in solving organic waste contamination problems in beaches all over Latin America and Europe.

ISSA Limpieza

In June, Bionetix[®] brought its natural biological solutions to the ISSA Limpieza Expo in Mexico City. Quemwalk joined Bionetix[®] at the booth to connect with the many visitors who stopped by with particular interest in natural cleaning and odor solutions for grease traps and toilets. Wastewater treatment and aquaculture solutions also attracted attention. It was a great opportunity to review Latin American business and establish connections with leaders throughout the region's cleaning industry!





BIONETIX® IN THE PRESS

Last March, POND Trade Magazine published a Bionetix[®] article on "<u>Natural Biological Methods to Boost</u> <u>Pond Clarity and Fish Health.</u>" The article discusses some of the science behind Bionetix[®] products and describes how various microorganisms and nutrients can be used as an approach to natural pond maintenance. In April, Industrial Biotechnology journal published an informative article from Bionetix[®] about "<u>Practical</u> <u>Reasons for Encouraging More Widespread Use of</u> <u>Bioaugmentation.</u>" The article discussed the many different industries where bioaugmentation can be beneficial and recommends making use of this commercially viable technology, which will have direct benefits and likely also lead to more data, research, and capabilities in the field.



NEW CASE HISTORIES

Since our last biannual newsletter in February, Bionetix[®] has published five new case histories on biological product applications around the world. These interesting examples of Bionetix[®] in action cover a variety of industries including wastewater, aquaculture, and biogas power production.

Case History #25: Treating Wastewater at Auto Plant in Mexico

An automotive factory in Mexico wanted to use bioaugmentation to help their plant meet COD limits for industrial wastewater discharge. They trialed Bionetix[®] BCP50[™] against two competitor products for a sixweek period. BCP50[™] helped maintain an 81% reduction in COD, meeting required limits for discharge to the municipal wastewater treatment plant. BCP50[™] outperformed the global automaker's standards and was approved for use in their factories around the world.

Learn more: <u>https://www.cortecvci.com/wp-content/up-loads/ch025.pdf</u>



Case History #26: Improving Productivity and Pond Clarity in Brazil Pisciculture Trial

Two side by side ponds were used for a Bionetix[®] trial at an industrial fish farm in Mato Grosso, Brazil. One pond served as the control, and the other pond received treatments of BCP54[™] and AEROBOOSTER-O²[™]. Each pond contained 6300 young fish. The fish in the treated pond also received AQUA-FEED[™] (a probiotic) in their fish food. At the end of the trial, the treated pond had a 42% increase in production over standard yields. Other benefits included excellent odor control, stabilized oxygen levels, and no need to clean and refill the treated tank except for replacing water that had evaporated naturally. The positive results have caused excitement about boosting regional fish production with non-harmful technologies and have also captured investor interest.

Learn more: <u>https://www.cortecvci.com/wp-content/up-loads/ch026.pdf</u>



Case History 27: Septic Tank Savings

Septic tanks usually need to be pumped out every two years. However, after one homeowner pumped out his 400 liter (1500 gallon) septic tank for \$430 USD, he started rigorously applying Bionetix's ECO-SEPT[™] pouch, a small pouch that is simply flushed down the toilet once a month. After five years, the tank owner had saved several hundred dollars on routine maintenance costs because the septic tank had passed all inspections, and no pumping had been required.

Learn more: <u>https://www.cortecvci.com/wp-content/up-loads/ch027.pdf</u>

Case History 28: Reducing COD and Ammonium in Pig Farm Wastewater

A pig farm in Spain had wastewater with high ammonium concentration. The client wanted to reduce these levels as well as COD levels. Samples of lagoon effluent were tested in a laboratory to evaluate the effectiveness of applying BCP50[™] and A55L[™]. BCP50[™] was able to reduce soluble COD by 41% in six days, while A55L[™] reduced ammonium by 93.8%.

Learn more: <u>https://www.cortecvci.com/wp-content/up-loads/ch028.pdf</u>

Case History 29: Bionetix® Products Help Increase Biogas Production

Normal methane production at biogas power plants is 60%. However, low efficiency operation led to only 40% methane production at two biogas plants in Japan. The plants were designed with a 300 kW/generator power generation capacity but were only generating 100 kW/ generator. Excess hydrogen sulfide generation was also causing a malodor problem. By applying BCP12[™], STIMULUS[™], and BCP80[™] at the manure-based biogas plant and applying BCP12[™], STIMULUS[™], and BCP57[™] at the high herbage content plant, the odor problem was resolved. Methane production increased from 40% to 60%, and the plants improved to 300 kW/ generator power production. It was also interesting to note that the biogas plant generated more power when using manure from livestock that had consumed DAIRY-FEED[™].

Learn more: <u>https://www.cortecvci.com/wp-content/up-loads/ch029.pdf</u>





Upcoming Events

CORTEC® WORLD SALES MEETING

October 2nd-4th, 2019 Saint Paul Hotel Saint Paul, MN USA <u>www.cortecwsm.com</u>

ISSA SHOW 2019

November 18th-21st, 2019 Las Vegas Convention Center Las Vegas, NV USA Booth #234 www.issa.com



21040 Rue Daoust Sainte-Anne-de-Bellevue, Quebec, Canada, H9X 4C7 Phone (514) 457-2914, Fax (514) 457-3589 www.bionetix-international.com, E-mail: support@bionetix.ca

Created: 02/2019

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