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Wiggling to Make Cents Out of Sustainability

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CEOCFO: *Mr. Tolbirt, the tagline on the BioFiltro logo is “Revitalize water.” How are you doing that?*

Mr. Tolbirt: We use earthworms and bacteria as natural elements to take waste water generated from the food and agriculture sectors as well as sanitary sectors and treat it to a quality that is apt for reuse. Our systems achieve performance levels comparable with much more expensive, complicated technologies at a fraction of the capital and operational expense. Additionally, we further revitalize water because, when treated for agricultural reuse, there are microbes and nutrients in the water which is more beneficial for crop irrigation than fresh water.

CEOCFO: *What do the earthworms do?*

Mr. Tolbirt: We start by building a containment basin which has layers of wood shavings, geotextiles, river cobble, and drainage basins. Wastewater is applied across the system surface through an irrigation system and slowly percolates down through the layers. The earthworms provide a number of functions – they break down solids, aerate the system, and produce microbial rich castings. By converting larger solids into smaller particles, earthworms provide food for bacteria and microbes. And, as they burrow throughout the wood shaving level in search of solids, the worms are passively aerating the system which the biofilm, formed by the microbial activity, needs in order to capture and break down the wastewater contaminants. And, as the worms are eating, they’re pooping and they further propagate the microbial activity within our systems. Additionally these castings are a beneficial byproduct which can be used by the same client or sold to customers who want to improve crop yield, water retention, and carbon cycling in their fields.

CEOCFO: *Are these just regular old earthworms?*

Mr. Tolbirt: We use the California Red Worm which is an effective, hardy creature that can live six to eight years. Worms are self-regulating so they populate as needed within our systems which make us a dynamic solution for seasonal food processors and wineries.

CEOCFO: *Are people looking for a better way or different way to treat wastewater?*

Mr. Tolbirt: Nationally, water regulations are increasing. There are two big families of regulation when it comes to water. One is water availability or supply, so trying to get laws in place to get water from where it is to where it is not. In California, there are a lot of laws that have been passed to get water from the north to the southern part of California and that is what helped create Silicon Valley and Los Angeles. Then there is also a lot of regulation on water quality. It is one thing to have the water quality and how it needs to be appropriate for drinking, showering, applying to the land and not destroying the soil or that water ultimately trickling down into the water table and contaminating it.

For the water quality part, which we really focus on and look at markets that have strong water quality regulations, those regulations across the country are starting to increase, particularly for the livestock industry, dairies, hog farms and poultry facilities, and there are a lot of regulations aptly so about not being able to discharge waste water from the good system into American water ways. If you remember the lettuce contamination of e-coli last year that was grown in Arizona, they found it was partially due to the water they were irrigating with that came from waste water from a dairy. These are regulations but are ultimately good for business, the environment and society because it keeps our water ways clean and useable.

CEO CFO: *What is involved in getting a plant up and running?*

Mr. Tolbirt: Our business is multifaceted as we work with the customers to not only design but also engineer, build, and maintain a system that reflects and supports their current wastewater needs and existing infrastructure. Some customers need to solicit discharge permits if they do not currently have one and/or building permits so there's regulatory work involved as well. Once the plant is constructed, BioFiltro will then inoculate the system with worms and microbes and provides telemetry monitoring and lab testing to ensure that the system operates within the parameters for which it was designed.

CEO CFO: *Is it similar no matter what country you are working in, as far as the plant and design?*

Mr. Tolbirt: The plant and design in of itself varies little between countries, but we need to be aware of the varying regulations and requirements for both water quality and construction. Even neighboring towns can differ in what is permissible so we need to take a very localized approach where we work with local engineering and construction firms who know all the in and outs.

“We are taking worms and microbes, things that have a billion years of research and development behind them, and using them to cost effectively improve the environment in which we all live. BioFiltro is one of the few companies who actually makes cents out of sustainability. It's a huge win for the environment.” - Matt Tolbirt

CEO CFO: *Typically, what might you be replacing?*

Mr. Tolbirt: Activated sludge is a very costly way to treat wastewater and it has been around for years and years, a simple lagoon system, more less a pond that collects water and there is an engine inside that pumps air to aerate the system. Oftentimes our customers are people who are growing their business and they are just at that point where they are starting to produce so much wastewater that their regulator is saying they need to do something before they get rid of it, That is where we come in. You get rid of it and is where we come in. They go from not really having anything to having us.

CEO CFO: *Once the system is set up, what is your relationship with the organization?*

Mr. Tolbirt: We are vertically integrated, so we offer all forms of service to operate the system for our customers. We will go ahead to make sure and maintain it on a regular basis. That is usually a much lower cost because are systems are fairly self-regulated, the worms work on their own, the whole system is designed to be very hands off, so we might send a guy out there as little as once every couple months just to keep an eye on it. Our systems all come with telemetry connected to it, so we can see our systems, we have data streaming from our systems, so even if they are on the other side of the world, we can look at a screen and see how it is doing and we can all up our customers and say there might be a sprinkler clogged so go unclog it or this pump might be broken and we can come out and fix it our they can fix it.

We try to keep it hands off so that we keep the costs down and then we offer a service where we will come in and do the casting harvest for our customers. Every couple of years, we have to come in and the worms push their manure up the surface and create this really rich soil. We just bring in some simple machinery and shave off the top ten to twelve inches, put those in trucks and sell them or give them to the customer. Then we put on fresh wood chips and the customer is back running again.

CEO CFO: *How do you reach out to potential clients and standout at conferences?*

Mr. Tolbirt: We are the only worm guys, so in our space, everyone knows us as the worm guys. When I came on, I said we have to put the worm as our mascot out from. It is how people know us. It is what differentiates us to a large degree. It is a little bit of a misnomer because the bacteria in our system are the true stars but they're invisible and not as loveable as the worm.

We do some online marketing and stuff like that but water issues are really local issues. We have people out in the field who have relationships with food processors, dairies, wineries and we are reaching out to customers that way all the time. Our sales folks are in the communities that are affected by some of these issues, so they really want to work with these entities to make them stay in compliance and keep them operating successful in that market.

CEO CFO: *How do you demonstrate the ROI?*

Mr. Tolbirt: We have a couple of different business models that we offer. We can sell the design, a turn key installation, or a full-service lease to own model. As such, our ROI depends on the business model that the customer engages as well as what they currently do with their wastewater. Customers who discharge to a city sewer, for example, pay a monthly fee that varies based on the strength of their discharge. Our model there is to go in and offer our Wastewater as a Service model where the customer does not pay anything upfront but rather a monthly fee for a fixed term. By reducing their contaminants before their water hits the city, our goal is to have our monthly fee + their new city bill be less than their previous city bill for an immediate ROI.

CEO CFO: *What might be different a year from now?*

Mr. Tolbirt: 2020 is going to be the year of the mega project as we are expecting to triple our 2019 footprint by the end of 2020 across a multitude of industries. We've secured federal contracts and hope to close with some big name private entities as well. We are going to dramatically grow the amount of BioFiltro systems out on the market and we will be treating a couple million more gallons every year. We are revitalizing water and taking a waste stream and turning it into a potential revenue stream, reducing carbon emissions, revitalizing soil and ground water.

CEO CFO: *Why the growth this year?*

Mr. Tolbirt: I think we are executing better, are more strategic in who we go after, we are very clear and are targeting customers who we know have a pain and are looking to solve it right now. We offer a compelling value proposition and way you look at it. I also think with regulations particularly in California and Washington, our states are starting to really be enforced to the point where companies of all sizes are saying they need to do something. I think it is a combination of those two things.

CEO CFO: *Why is BioFiltro an important company?*

Mr. Tolbirt: BioFiltro is important because we are one of the high impact companies of the future. It is not about advanced technology with us. We are taking worms and microbes, things that have a billion years of research and development behind them, and using them to cost effectively improve the environment in which we all live. BioFiltro is one of the few companies who actually makes cents out of sustainability. It's a huge win for the environment.