

Cyclosporiasis, Organic Liquid Fertilizers & Guardian Plants



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COMING UP THIS WEEK:

Cyclosporiasis
Prosplant Roof
Apogee IR Sensor
Griffin / Biota Nutri
Guardian Plants
Rooted-In-Tech

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Cyclosporiasis

You know when a news story on lettuce runs, the CEA folks will hear about it regularly.

Cyclosporiasis has flooded the news lately as lettuce contamination has resulted in at least 7,000 illnesses across 17 states. FDA traced the outbreak to Taylor Farms de Mexico, a salad mix processor that supplies both retail and foodservice. My beloved Taco Bell was where a lot of those exposures happened, only adding to the chain's already well-established meme culture of digestive trauma.

Cyclospora itself is an interesting bugger. A protozoan, it differs significantly from bacterial illnesses like *E.coli* or viral ones like norovirus. Its reproductive biology presents a unique tracking challenge: it reproduces sexually, and it has a sporulation phase. That means a couple of hurdles for the folks working to contain the outbreak.

DNA is the primary method for identifying sources. Bacterial genetics usually stay relatively stable, meaning an outbreak can be uniquely identified and the specific strain traced, like a fingerprint, back to the original source. Cyclospora's microbial love scrambles the genetics, muddying the clear identifier pathologists usually rely on. Moreover, Cyclospora can't be cultured in the lab like other pathogens, so there's no isolate to fall back on, either.

Despite the challenges, one outbreak has been traced to Guanajuato, in central Mexico, northwest of the nation's capital. For the farmers there, it's been a disaster. Public trust in the region's produce has plummeted, casting doubt on its short-term economic prospects. U.S. suppliers are already pivoting away and looking to source lettuce elsewhere.

I don't know what this means for CEA folks. The lettuce in question here was iceberg (not romaine this time). I don't have anything good to say about iceberg lettuce, besides that it is a big, watery boy. Obviously, when it comes to cheap lettuce you can throw on somewhere between 2 and 5 soft tacos at 11:30 p.m., iceberg is hard to beat. But when consumers have a choice, I'd expect them to gravitate toward lettuces they deem safe. This is where CEA can shine, if consumers know the difference...

Read more about the region being affected [here](#).



Prospiant Novavert Retractable Roof

Prospiant, a major greenhouse manufacturing company, has announced a partnership with Novavert, now offering a retractable roof system for greenhouses, nurseries and other structures. Prospiant is now the premium partner for the Novavert lineup in Canada and the U.S. This retractable roof has a surprising number of features that make it fundamentally different from other retractable roofs.

When presenting at Cultivate'26, the strength potential of the roof seemed almost laughable, with weight -holding capacity of their aluminum frame touted at above 1,000 kg/m². This means you could theoretically drive a Mazda Miata across one; snow, hail and high winds just aren't a concern with this system.

In addition, the installation was another huge factor. The system can retrofit into most existing retractable roof systems, and be installed without impacting the crop itself. The panels mount with plates riveted to the film rather than hooks that perforate it, and with no sewn-on straps, so water and dirt don't accumulate. If your last roof got blown off, this is ideal to slap on without impacting work and without having to worry about it getting blown off again.

Novavert has been manufacturing retractable roof systems for decades, and the new technology paired with their partner Prospiant will bring this system to North American greenhouses.

Learn more [here](#).



The retractable roof above a retail nursery.



Apogee IR Radiometer

Apogee Instruments, a trusted supplier of horticultural sensors, has a line of Infrared Radiometers worth checking out. These sensors may be the ticket to understanding your crop real-time in the greenhouse.

Infrared Radiometers detect infrared light, the glow everything emits from having heat. A non-contact thermometer of sorts, IR Radiometers differ from your temperature sensor in the aspirator by sensing the temperature of surfaces, instead of the air. The surfaces we are interested in are leaves of plants in the greenhouse. The key difference between an IR Radiometer and an IR Camera (like a FLIR) is the radiometer only returns one value. This means the aim and field of view of the sensor should be broadly over a consistent plant canopy. The data from the instrument can provide insight into plant transpiration, drought stress, or help control heating to keep condensation from forming on plants.

While the product has been around for years, the use case is becoming more pronounced as we head into a world of AI, with plant-centric measurements becoming the goal over environmental conditions. If you're interested in learning more about IR detectors or the other products Apogee carries, follow the link [here](#).



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Griffin Distributes Biota Nutri

The ever-growing world of biology-forward fertilizers keeps expanding with a few new products available.

Griffin recently announced its partnership with Dutch fertilizer company Biota Nutri. With a broad portfolio of organically approved fertilizers, Biota Nutri offers myriad products, from single fertilizers to blends, with and without added organics, as well as biostimulants. These fertilizers come in liquid form, and can be used in a broad range of horticultural systems, most notably hydroponics.

From my experience, if it works well in hydroponics, it'll work well most anywhere. Full disclosure on my own biases: I run both conventional hydroponics and an organic soil-based garden at my house. On the occasion I purge my hydroponics reservoir, it goes on the lawn, trees and landscaping. With a fertilizer like the ones Biota Nutri offers, I'd dump it in my garden without fear it'll impact the soil biology in a negative way.

The other aspect of this fertilizer that's fascinating is the single element products. So often with organic fertilizers, it seems like you have to give up precision control. With the single element options, it's possible to boost phosphorus, add magnesium, or remedy micronutrients independently of other fertilizer constituents. This makes applications in systems that have fruiting and flowering crops more attractive, as nutrient regime transitions are possible.

Check out the partnership [here](#) and [here](#), and I look forward to trying these out myself!



A sample of Biota Calcium supplement with a characteristic organic brown color.

Guardian Plants

While at Cultivate'26 this year, I had the pleasure of meeting Carol Glenister of IPM Laboratories, producer and distributor of beneficial insects. She taught me about a term I'd never heard before: Guardian Plants.

The idea behind Guardian Plants isn't new. We know beneficial insects, like orius, can persist on pollen of species like Sweet Alyssum and Peppers. These "Habitat Plants" feed beneficials directly, while "Banker Plants" host a harmless alternative prey to keep stocks of beneficials alive in your greenhouse. Conversely, "Trap Crops" are plants used to lure pests away from your valuable plants. The one that immediately comes to mind for me is Virginia Creeper and Japanese Beetles. I don't care much for either, so if I can have a corner of my yard that is loaded with both, and the rest of my yard free, it's a great deal. Guardian Plants is the umbrella term for all of it, and for the fact that one plant can pull several of these duties at once, or switch roles as the season goes on.

IPM Labs has great resources on what systems are used for which pests, as well as subtleties on how to properly set these up. Insects have minds of their own, so some geometries and arrangements of Guardian Plants work better than others. Check out their [Guardian Plant webpage here](#).

Rooted-In-Tech

A vertical farm success story, Rooted-In-Tech continues to supply North American markets with healthy grafted vegetables and plans to expand to reach more greenhouses.

Rooted-In-Tech follows the same story as a previous company in our newsletter, Apogee Instruments. Both started in garages of university professors, Apogee and Rooted-In-Tech show how the right people with the right passion can dramatically impact the greenhouse industry.

Dr. Ricardo Hernandez founded Root-In-Tech in December of 2024 with the goal of applying his research and university learnings. Dismayed by how groundbreaking research can sit on shelves without being adopted, Dr. Hernandez did something neat that we've all done; he built a vertical farm in his garage. However, unlike so many of us, he got his garage certified as a farm by the USDA as a licensed organic and conventional vegetable propagator. Within a month, his first order for 25,000 plants came in.

Working with some of the largest tomato producers in North America, Rooted-In-Tech is expanding their production and moving into a more typical commercial facility, while maintaining their high quality grafted and disease-free starters.

Rooted-In-Tech services growers both big and small. If you're interested in learning more about sourcing clean, grafted vegetables, follow the link [here](#) to learn more.



Founders Dr. Ricardo and Liliana Hernandez in the vertical propagation facility.



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