

Discover the OASIS® AeroFamily Substrates Advantage

These next-generation precision hydroponic substrates target real-world crop, climate and production demands.

OASIS® AeroFamily Substrates have been attracting attention in the Controlled Environment Agriculture (CEA) industry lately. Here at Oasis Grower Solutions, we recently released a Product Carbon Footprint Assessment for OASIS® AeroMax™ PlugSheet, then followed that up with the launch of OASIS® AeroSelect™ PlugSheet at Indoor Ag-Con '24. We're happy to see this rapidly growing family of precision hydroponic substrates generate the interest it deserves.

From our beginnings 55 years ago, Oasis Grower Solutions has built its reputation and its engineered foam substrates on the idea of helping growers succeed. And that's precisely what OASIS® AeroFamily Substrates do.

With OASIS® AeroFamily Substrates, precision hydroponic growers can respond to real-world crop, climate and production demands. Whatever the challenges of your hydroponic growing operation, there's an OASIS® AeroFamily Substrate to help — and more coming down the pipeline soon.



OASIS® AeroFamily Substrates Innovation

Dr. Vijay Rapaka, our Director of Global Grower Operations and Research, recalls the quest for a new core substrate technology in 2019. Then Corporate Grower Research Manager and lead scientist for our research team, he envisioned a new generation of substrates to help growers meet the future as CEA evolves at breakneck speed.

While most crop steering and precision growing focused on finished plants, our goal was precision into the root zone, even for young plant production. "We wanted the substrate to be a functional part of the propagation and production process, not just a physical matrix," Dr. Rapaka explains.

Much like the failed adhesive experiment that led to the Post-It Note, suitable chemistries for the new substrate came as Smithers-Oasis Chief Polymer Scientist Paul Kelly, Ph.D., struggled with a new foam technology for another application. "After discussions with Dr. Rapaka about his needs for a new hydroponic foam product, we decided to try the new foam technology and found successful results," Dr. Kelly shares.



Dr. Paul Kelly
Chief Polymer Scientist, Smithers-Oasis

From that starting point, our Research, Innovation & Development (RI&D) team conducted extensive research incorporating advanced chemistry. Dramatic advances in core technology led to a unique open-celled matrix with ultra-low density and strength. In turn, that opened the door to a new generation of engineered hydroponic substrates with air and water porosity optimized for climate, crop, growing system and more.



Dr. Vijay Rapaka

Director of Global Operations and Research, Oasis Grower Solutions



OASIS® AeroFamily Options

Thanks to the OASIS® AeroFamily Substrates platform technology, we're delivering what precision hydroponic growers tell us they want and need. The following OASIS® AeroFamily Substrates are now available, soon to be joined by more:

- **OASIS® AeroMax™ PlugSheet**, the first OASIS® AeroFamily Substrates member, launched in 2021. Ideal for crops and conditions with lower water demand, this precision substrate maximizes root zone air porosity for uniform germination, rapid root penetration and unrestricted seedling growth. As an added benefit, the drier substrate surface circumvents algae formation.
- **OASIS® AeroSelect™ PlugSheet**, the second OASIS® AeroFamily Substrate to meet the public, launched at Indoor Ag-Con 2024. Ideal for crops and conditions with higher water demand, this grower-driven substrate optimizes water-holding capacity and air porosity. Outstanding OASIS® AeroSelect™ results with spinach, a notoriously challenging crop, are an added bonus.

In a significant benefit to precision growers, these clean, inert engineered foam substrates come without a starter charge. Instead, you get maximum flexibility and precision control for nutrient dosing precisely aligned with your crop and your specific needs. These substrates also ship dry — reducing shipping costs, circumventing mold growth or other issues, and extending shelf life.

To undergird your food safety protocols, environmentally sound OASIS® AeroFamily Substrates are free of organic materials and pathogens, including plant and food-borne pathogens. Later this season, we'll be launching more OASIS® AeroFamily Substrates, with new options for large-scale, automated operations.

As Dr. Rapaka reminds us, OASIS® AeroFamily Substrates are a big leap in the right direction, but there's "more to be done and more to come in terms of functionality, performance and sustainability." Around here, we're excited about the grower-driven, real-world solutions coming next. We think you will be, too.