DEEPVELO Targets Global Agricultural Market with Eco-Friendly Water Treatment Technology ZOECORE

“Our Technology Uses Electromagnetic Fields to Break Down Water Molecules, Maximizing Moisture Absorption to Improve Crop Yields by 30% Without Chemicals.”

From left to right: Thomas Goodwin of DEEPVELO’s International Business Development and Manager Bomi Jeon

ZOECORE has two models, Model 1 and Model 2. | Image provided by DEEPVELO

PANGYO, GYEONGGI-DO, SOUTH KOREA, July 16, 2026 /EINPresswire.com/ -- DEEPVELO (CEO Sunguk Hong), an agricultural technology startup anchored in Pangyo Techno Valley, Gyeonggi-do, is accelerating its expansion into the global market spearheaded by its eco-friendly agricultural water treatment device, ZOECORE. Utilizing a proprietary water treatment technology that leverages electromagnetic fields to break down water-molecule clusters into molecular units, DEEPVELO delivers solutions that maximize crop moisture absorption and photosynthetic efficiency. This technology improves crop yields and quality by approximately 30% without chemical fertilizers or additives, while concurrently reducing the use of pesticides, fertilizers, and water, emerging as a prominent eco-friendly agricultural technology that responds to climate change.

ZOECORE has already demonstrated its

efficacy in enhancing crop yields across more than 100 research institutions, farms, and universities worldwide, including the United States, the Netherlands, Taiwan, and Turkey. The company's primary targets include the medicinal cannabis cultivation market in North America, where profitability is about 1,800 times higher than conventional crops, enabling high-value-added generation; eco-friendly golf courses, where minimizing water and chemical use is critical; and global enterprise corporations reinforcing their ESG management stances. To this end, DEEPVELO recently participated in an agricultural exhibition in Canada and is preparing pilot tests with 10 to 15 local farms, while conducting a Proof of Concept (PoC) in the domestic market with Samsung Welstory for container farm applications.

Logo of DEEPVELO | Image provided by DEEPVELO

Substantial achievements in the European market also draw attention. The company completed technical verification at Wageningen University & Research in the Netherlands, a top-tier agricultural institution. Based on these results, it will initiate pilot projects with eight large-scale Dutch farms starting in July 2026. The startup secured second place at a European agricultural technology exhibition, earning recognition for its technical prowess, and entered into a European regional master distribution agreement valued at a minimum of 800,000 USD this year. DEEPVELO stated that ZOECORE will serve as a reasonable and effective alternative for the vast majority of conventional farms that find it difficult to deploy expensive smart farm facilities that require decades to achieve a return on investment, expressing expectations that it will establish itself as a mandatory, fundamental technology adopted across all farms globally in the future.

Pangyo Techno Valley met with DEEPVELO's International Business Development & Partnerships Lead, Thomas Goodwin, and International Business Development Manager, Bomi Jeon, at the Startup Campus to discuss their eco-friendly agricultural tech ecosystem, high-value market validation, and upcoming international expansion roadmaps.

Q1. Can you tell us a little bit about DEEPVELO? What kind of company is it?

A. Thomas Goodwin, International Business Development & Partnerships Lead: DEEPVELO focuses on water membrane permeability improvement technology. Our main product, ZOECORE, is an eco-friendly agricultural water treatment device designed for farmers. It improves plant health by helping crops absorb water much more efficiently so that they can ultimately grow better, become more resilient against disease, and allow farmers to reduce their use of water, chemical fertilizers, and pesticides. Water is the principal element that is central to

a crop's growth and ultimately the yield the farmer gets from it. So we're targeting that core element, going right to the source of the crop's life.

Q2. ZOECORE seems like a central concept. Can you explain exactly what that is and how it works?

A. Thomas Goodwin: Plants absorb water through microscopic channels called aquaporins. These aquaporins function like a very narrow hallway, but water molecules naturally like to grab onto each other and form massive clusters. Because of this structural constraint, a plant cannot absorb those clusters directly; it must break them apart first, which significantly reduces the efficiency and speed of water absorption. What ZOECORE does is use a proprietary electromagnetic field to break down these water-molecule clusters into individual molecular units. This enables the plant to take up water much faster and more efficiently, directly increasing its moisture content, improving photosynthetic activity, and elevating crop yields and quality by approximately 30% without chemical inputs.

Q3. This feels like the next step in the evolution of farming technology, moving past heavy chemicals or exorbitantly expensive smart farms.

A. Thomas Goodwin: Exactly. For over a century, chemical fertilizers and pesticides have been the predominant tools for increasing yields, but they have severe negative impacts on the environment. For that reason, global regulations are tightening, and governments want the industry to reduce chemical dependency. At the same time, farmers operate on incredibly tight margins and need to improve yields. While new technologies like smart farms are cleaner, they are exorbitantly expensive, yielding an ROI measured in decades rather than years. That is not scalable for the vast majority of conventional farms. ZOECORE is an affordable, chemical-free, sustainable, plug-and-play alternative. It fits seamlessly into any part of a farmer's existing irrigation setup, working just as effectively on traditional outdoor farms, in greenhouses, or on highly automated smart farms.

Q4. This water treatment model clearly yields direct cost and environmental benefits. Where is this technology currently being deployed or validated around the world?

A. Thomas Goodwin: ZOECORE has already been validated and tested on over 100 working farms, research institutions, and universities globally, spanning South Korea, Turkey, Taiwan, and the United States. While the technology benefits all vegetation, as a new product in a traditionally conservative market, we are focusing on high-value crop sectors first. We're focusing on the medicinal cannabis cultivation market in North America, which is up to 1,800 times more profitable per acre than conventional crops, giving operators more financial leeway to adopt innovative sustainability tech. We also focus on eco-friendly golf courses, where water, fertilizer, and pesticide management are among their largest operational cost centers. We just returned from an agricultural trade show in Canada, where we are initiating pilot trials with 10 to 15 local cannabis farms. Domestically, we are conducting a proof of concept (PoC) with Samsung

Welstory to standardize ZOECORE across their container farm division.

Q5. We heard you have also reached significant milestones and secured partnerships within the European agricultural market.

A. Bomi Jeon, International Business Development Manager: Yes, we recently completed strict technical verification at Wageningen University & Research in the Netherlands, which ranks among the highest global tiers in agricultural science. Backed by these certified results, we are launching pilot projects with eight large-scale Dutch farms starting in July 2026, and our team is flying to the Netherlands next month to finalize implementation details. We participated in a major European agricultural technology event and won second prize for technology, competing directly against high-tech offerings from global conglomerates such as Philips. This validation helped us secure a European regional master distribution agreement valued at a minimum of 800,000 USD this year. Our ultimate vision is for ZOECORE to evolve from an optional accessory into a mandatory, basic component for every farm worldwide.

Q6. What are your thoughts on Pangyo Techno Valley as a base for DEEPVELO's operations?

A. Thomas Goodwin: The entrepreneurial energy here is entirely tangible. You cannot walk blocks in any direction without being surrounded by young tech founders and innovators, and it honestly feels like deals are being made everywhere you look—even casually in the cafeteria. This dense concentration of tech infrastructure and public support has immensely helped our business. In fact, we met many of our current strategic partners simply because they were physically located within this same cluster. Being part of global acceleration programs, such as the one led by the GBSA and run by Y&ARCHER, gives us essential office space, IR pitching training, and specialized corporate networks that help local startups scale into international markets.

Q7. What is the ultimate goal for DEEPVELO moving forward?

A. Thomas Goodwin: Our goal is to firmly position ZOECORE as a foundational technology responding to climate change on a global scale. We want to make industrial water optimization accessible and affordable for every single farm, protecting the planet's ecosystems while protecting the farmer's bottom line.

DEEPVELO is participating in a global acceleration (AC) project supervised by the Techno Valley Innovation Group of the Gyeonggi Business & Science Accelerator (GBSA) and operated by Y&ARCHER. The project identifies promising startups aiming to expand into global markets and provide comprehensive support for practical growth, including office space, overseas market-entry consulting, IR pitching training, and assistance with participation in global demo days. At the Pangyo Startup Campus, participating companies are accelerating their overseas expansion plans and strengthening their investment-attraction capabilities through this initiative. It receives evaluations for providing a springboard for global expansion by linking custom training with

expert networks tailored to the entry into local markets.

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