

Tupperware shoots for the stars with a device meant to grow vegetables in space

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Tupperware Brands is looking beyond the kitchen by going to space.

The Osceola County, Fla.-based company known for its [plastic containers](#) has been awarded a patent for a device intended to grow vegetables in low Earth orbit.

A partnership with NASA and research and manufacturing company

Techshot, the device is called the Passive Orbital Nutrient Delivery System, or PONDS.

NASA needs its astronauts to grow food as the length of space missions increase to reach the moon and Mars. The project could also help Tupperware make money on Earth.

Bill Wright, Tupperware Brands' executive vice president of product innovation, said work on the device could apply to future indoor gardening products from the company. He said home gardening for fresh herbs and other plants has been a growing trend that has accelerated with the coronavirus pandemic.

"It also tells people that we're not the same old Tupperware," Wright said. "It's reintroducing the brand to a whole new generation."

The patent follows big changes at the business over the past year, including the hiring of Miguel Fernandez as its new CEO after Tricia Stitzel stepped down last November. Tupperware has struggled, having not reported a sales increase in a quarter compared with the previous year since 2017.

There are signs of confidence returning to the company. The [stock price](#) had soared to more than \$22 on Friday after falling to between \$1 and \$2 at times in March.

Tupperware started working on the PONDS project in 2017, after development on it began in 2015 by a team at NASA's Kennedy Space Center. The [space agency](#) was looking for the next generation plant-growing system, said David Kusuma, Tupperware's vice president of research and innovation.

The company was connected to the project through the Kennedy Space

Center's technology transfer program.

Its design is focused on watering the vegetables without gravity and was inspired by the way plants naturally absorb water through "capillary action," according to a Tupperware news release. Astronauts must insert a small syringe of water into the device for distribution to the plants.

Ground studies have demonstrated PONDS can grow lettuce, tomatoes and other plants, but NASA has yet to prove it can work in space under microgravity conditions, said Howard Levine, a chief scientist at NASA's Kennedy Space Center.

"There are challenges in space associated with controlling the distribution of water within the PONDS units, and several modifications have been incorporated into the flight versions of PONDS to address these challenges," Levine said in an email.

"Having said that, as space mission durations increase, it becomes more important to be able to grow food for the astronauts rather than bringing it all with them, which is extremely expensive in the long-term, especially when we have habitats on the moon and Mars."

PONDS has been launched to the International Space Station for testing three times since 2018 and another launch is expected next year.

On one of those tests the device over-watered the plants, and on another it ended up providing too little water, Kusuma said.

Learning how to control the water flow could help with home gardening products, according to Wright.

Tupperware has been involved in other space projects in the past, such as customizing a container for an experiment focused on stem cell research

sponsored by the European Space Agency in 2005, according to Kusuma.

"We actually have a longer [space](#) history than most people know about," Kusuma said.

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