

business

## **Disposables maker may be here to stay** *EarthShell seems finally to be bringing its product to shelves*

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It seemed like a natural - disposable food packaging that would decompose instead of languishing for years in the nation's overflowing landfills. But EarthShell Corp. has spent more than a decade and hundreds of millions of dollars trying to bring various versions of its biodegradable products to market, only to see one deal after another fall apart.

Now it looks like the 14-year-old Lutherville-based company's throw-away plates and bowls will soon be on the shelves of some of the nation's best-known retailers.

Made from potatoes, corn and ground limestone, EarthShell's disposable dishes are microwave-safe and compostable. EarthShell ware has gotten a lot of interest from environmentally minded consumers and corporations, and was recommended in Good Housekeeping's July issue as one of "50 easy ways to go green." But the company has failed to translate that interest into revenue, despite coming close a number of times.

In 1997, the company began working with McDonald's to produce foam clamshells for the Big Mac, but that ended in 2003 when EarthShell's manufacturing partner, Sweetheart Cup Co., was sold to Solo Cup Co. EarthShell managed to find another manufacturing partner, Green Earth Packaging, but that relationship, too, dissolved. Meanwhile, EarthShell continued borrowing millions of dollars to stay afloat, and management changed several times. But its backers never gave up.

This time is different, said Chief Executive Officer Vincent J. Truant, a former Sweetheart executive who was promoted to the top job in September.

EarthShell has signed on a handful of retailers, ranging from giant Wal-Mart Stores Inc. to upscale regional grocer Wegmans, to stock its 9-inch plates and 12-ounce bowls on store shelves. EarthShell is also in the midst of merger talks with its manufacturing partner, ReNewable Products Inc., which would give it its own manufacturing plant and more control of its destiny.

"It really is a new beginning for the company," Truant said.

Other companies also make compostable dishware - from plates and cups to cutlery - using a variety of ingredients, including corn, sugar cane, wheat and even tapioca. But it is still a small segment of the annual disposable packaging market, which Truant estimates to be \$13 billion in the U.S. and \$30 billion worldwide.

EarthShell's plates and bowls will be the first compostable dishware sold by Wegmans, said spokeswoman Jo Natale. "We have seen a growing demand from customers for products that are environmentally friendly, whether it's organic produce or biodegradable dinnerware," Natale said. "We think there's a market for it."

Unlike other eco-friendly products that cost more than mainstream competitors, Truant said EarthShell products can be competitively priced because they are made from renewable crops and not petroleum-based resins like polystyrene, which are tied to increasing oil prices. Truant estimates corn sells for 15 cents a pound and potato starch about 25 cents a pound, while polystyrene runs between 60 cents and 80 cents a pound.

The company is not only trying to appeal to consumers who care about the environment. Truant said ballparks, hospitals and other large producers of food waste would find the product appealing. The food and containers could be tossed into the garbage and both would decompose.

It would solve a growing problem at the nation's landfills. Packaging and containers accounted for nearly a third of the 236 million tons of solid waste dumped into landfills in 2003, the latest year for which data are available, according to the U.S. Environmental Protection Agency.

And that makes EarthShell's concept all the more intriguing, said Steven Mojo, executive director of New York City-based Biodegradable Products Institute.

After a visit to EarthShell's offices this month, Mojo said the company seems to have overcome its start-up problems and is ready to manufacture. "To me it's a company that has a very interesting technology," he said. "They've turned the corner."

Jacquelyn Ottman, a green marketing consultant based in New York City, said consumers are more environmentally conscious than they've ever been, especially with oil prices rising sharply and heightened concern about global warming. And more are making choices based on those concerns.

"They feel they're doing their bit because they're not buying petroleum-based products," she said about EarthShell consumers.

However, at the supermarket, Ottman said, price still matters. Generally, people won't pay a premium for a compostable plate, she said.

EarthShell worked with the USDA's Agricultural Research Service to develop the right formula for the "batter" of vegetable starch, limestone and water to be effective and cost-efficient. The average cost of the bowls and plates is 6 cents each.

"We feel like we're helping to not only make the product more cost-effective, but also to open up other markets for farmers and their products," said Greg Glenn, lead scientist at ARS in Albany, Calif., who helped EarthShell choose the right vegetable starches.

The manufacturing process doesn't require much energy, Truant says, and is akin to a large waffle iron. When the batter is poured

into the heated mold, the water in the mix converts to steam and expands the batter, which takes the form of the mold and hardens.

EarthShell holds 100 patents on how the plates and bowls are made. Until now, the company has licensed manufacturing and distribution to third parties, and earned nominal royalties and licensing fees. For example, its partner in Mexico, EarthShell Hidalgo, has an agreement with Wal-Mart to stock EarthShell products in 300 stores there.

The company is pursuing a merger with its U.S. licensee, ReNewable Products, which owns the Lebanon, Mo., plant where the EarthShell manufacturing technology is housed. The 45,000-square-foot space has 16 manufacturing lines and 15 employees ready to churn out the product, he said.

Not being able to manufacture hurt the company in the past. Boulder, Colo.-based Eco-Products Inc., which sells biodegradable containers from a number of different vendors, stocked EarthShell products briefly last year but stopped because EarthShell didn't have manufacturing capacity, said sales manager Jim Lamancusa. He said demand was low and after seven months, he dropped it.

Truant, a former executive with Owings Mills-based Sweetheart Cup, said it has been his goal to establish EarthShell as a manufacturer.

EarthShell employs 10 people at its Lutherville headquarters, and Truant expects to hire five people in the next 60 days as the company ramps up in anticipation of new business.

However, the next six months will be a crucial time for the public company.

For 2005, the company posted a \$6.2 million loss on revenue of \$200,000. Its shares, which went public in 1998 at \$21, trade over the counter and are considered penny stock.

As of March 31, EarthShell had a working capital deficit of \$7.5 million. If it is unable to raise additional capital this year, EarthShell "may not be able to continue as a going concern," the annual report said.

EarthShell's co-founders, Essam Khashoggi and Simon Hodson, have stepped away from operations to allow Truant to take the company forward. Hodson resigned in January to become chief executive of Khashoggi's company, E. Khashoggi Industries LLC, which is EarthShell's largest shareholder with nearly 6 million shares.

Khashoggi declined to be interviewed through a spokeswoman, but in a statement a year ago, he maintained that EarthShell has a "bright future."

"We have strong executive leadership in place that has effectively dealt with many challenges to bring the company to its current level of accomplishment," he said.

Truant is confident the company will meet sales this year to keep going - something he said he wasn't able to say even a few months ago.

"We're turning around the company," he said.