

Box Harvests Water in the Driest Places

By Alyssa Danigelis | Tue Apr 13, 2010 11:05 PM ET



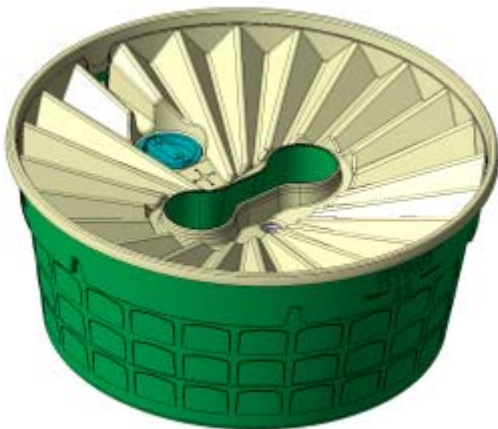
Blood from a stone? Try growing crops in water-poor areas where unpredictable weather can wreak havoc. Happily for cash-strapped farmers, a prototype device is managing to coax agricultural miracles out of the desert.

Ever since our elementary school class watched the [Voyage of the Mimi](#) episode where a young Ben Affleck learns how to gather rainwater for drinking, I've known that there could be clever ways to collect water. A bunch of interesting approaches have emerged. Last fall, a community in Peru began [using nets to collect the water from fog](#), which they could then use

for farming instead of shelling out additional money for municipal water.

Now, [according to a piece by Jim Witkin](#) in the *New York Times* Green Inc. blog, a prototype for a "water battery" promises to work similar wonders in the desert.

Dutch entrepreneur Pieter Hoff retired from exporting flowers and turned to invention. His [Groasis Waterboxx](#) is basically a 20-inch by 10-inch polypropylene box that captures water from the air. Somehow this escaped the *Times*, but the inspiration for this box is actually...bird poop. Yep. It's [modeled after the way](#) excrement protects seeds that birds have digested, providing humidity and shelter from the elements so they can grow. The box surrounds the young plant and at night an insulation plate allows it to harvest water through condensation. The lid also captures rainwater. A tiny "wick" then deposit small amounts of collected water onto the plant's roots daily.



The Groasis delivers enough water so that the plant can access deeper reserves underground, then the box lifts up and can be reused with another plant. Polypro is still plastic, but Hoff told Green Inc. that he's working on a biodegradable model constructed from bioplastic. I love the way this guy thinks. Recently Hoff wrapped up tests of his prototype in the Sahara, where 90 percent of trees planted with the box survived when it was taken away while only 10 percent of box-less ones made it. Now his plan is to test the Groasis in a few dozen other areas. Hope the birds don't become jealous.

Photo: Pieter Hoff with his Groasis Waterboxx and illustration of the box. Credit: AquaPro.

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