

Developed in part by an EPA SBIR grant, PittMoss is an environmentally-friendly alternative to peat moss, and provides 50% better moisture holding capacity than other growing substrates



PITTMOSS

Peat moss has long been a staple in potted plants, vegetable gardens, and lawns, with its fluffy composition favored as an organic soil amendment. After all – how can you possibly go wrong if something is organic? Well, Mont Handley can tell you, along with most conservationists who have been instrumental in bringing the questionable harvesting practices of peat moss to light.

PHASE III SUCCESS

\$1.2 million in private equity funds; consistent revenue growth year after year, and product is currently being sold by retailers nationwide.

AGENCIES

EPA

SNAPSHOT

Pittsburgh-based PittMoss has perfected a patented formula that outperforms peat moss and is better for the environment. Available to commercial greenhouses and homeowners alike, PittMoss is slowly cornering the industry with additional plans to expand.

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Over twenty years ago, Handley was working at a local nursery, and was amazed at the sheer quantity of peat moss being delivered day after day. Naturally, he wondered if the supply of this seemingly perfect ingredient was unlimited. He soon discovered it was anything but. This became the very beginning of his entrepreneurial journey, which two decades later would evolve into PittMoss® – a superior and sustainable alternative to peat moss.

Peat moss is formed when sphagnum moss becomes compacted in bogs, which are indigenous to certain rare wetlands found in northern regions. Once a peat bog is harvested and destroyed, it can take thousands of years for another one to grow back in its place. Peatlands also sequester up to 33% of all known soil carbons, enabling them to store away more carbon from the atmosphere than all of the planet's forests combined. Sure, they make potted office plants look amazing, but at the expense of these endangered wetlands and our air quality.

Armed with just a hand-me-down Cuisinart and a radical idea, Handley began to work on his patented formula. It took three years of trial and error for him to perfect his combination of recycled paper and other eco-friendly additives.

"I began to think of myself as an amateur organic chemist," recalls Mont Handley, Founder and current board member of PittMoss. "I had a full time job, but every night I'd come home and work on this hobby of mine. I finally stumbled upon a formula that was stable, but I needed to know if it would sustain growth."



◀ PittMoss Founder Mont Handley pitches his innovation on ABC's Shark Tank. Three "sharks" took the bait

Made from recycled newspaper, PittMoss is available at a variety of retail chains in Pennsylvania and Ohio, with plans to expand distribution nationwide ▶



This is when Handley, on recommendation from the small business development center at Purdue University, turned to the Environmental Protection Agency (EPA) Small Business Innovation Research (SBIR) program in order to gain critical capital needed to fund growth trials. Although the project did not transition past a Phase I grant, Handley was still able to prove the feasibility of his product, and that's all he needed to move forward.

"SBIR really allows you to prove your concept," says Handley. "I had a two-stage proof of concept: Does this product work and would it be accepted by commercial growers and home gardeners? And I proved that through SBIR. You have to be willing to poke holes in your own argument in order to be a good entrepreneur. If we had gotten bad results from the SBIR

study, I probably never would've gone any further. But we saw the physical growth of these plants, and we knew it worked."

The SBIR project proved that a 50/50 mix with PittMoss was a successful ratio for optimal growth. Subsequent years of additional trials however, proved that some plants could even be grown using 100% PittMoss. PittMoss not only wets consistently while retaining moisture and draining efficiently, but it does not require the application of a costly wetting agent. Since it retains water so well, PittMoss requires less watering than alternatives, and eliminates fertilizer and water runoff. It

also tends to adopt the pH of the material with which it is blended.

In 2015, PittMoss completed a proof of concept phase in garages and small greenhouses. With its perfected formula and its record of replacing traditional growing substrates by 100% in many trials, PittMoss started to garner not only local, but national attention. Pittsburgh's Idea Foundry, an incubator and early

stage funder of entrepreneurial businesses, took an interest in the company and provided professional mentoring along with other critical services.

Perhaps the biggest break the company received was a strategic nomination from the U.S. Small Business Administration. ABC's Shark Tank – the huge network reality show that places small businesses in front of "sharks" like billionaires Mark Cuban and Barbara Corcoran, among others – was seeking veteran-owned small business to appear on the show. The SBA aligned PittMoss with the network in 2015, and Handley stood up before the sharks and made his pitch. Three of the sharks expressed interest in investing and a deal was made with Cuban. Coupled with some local investment money from venture capitalists, PittMoss was able to secure \$1.2 million in private funding. It was a nice confirmation for Handley, who had just left his job, cashed out his 401(k), liquidated his house, and threw himself head first into his business.

Today, PittMoss is selling at a variety of retailers in Pennsylvania and Ohio, with plans to reach many more homeowners this year. Although the company started with business to business sales and is a leading supplier to commercial greenhouses, their goal is to make PittMoss available to everyone. When thinking about his success, Handley gives much of the credit to the state of Pennsylvania and the city of Pittsburgh in particular, for fostering that entrepreneurial spirit within him.

"When I moved to Pittsburgh, it was very different from where I had grown up in Indiana," says Handley. "Not only is it very industrial but it is huge for entrepreneurship, start-ups, and sustainability. I was immediately introduced to one of the largest green houses in the region, and everybody kept telling me, 'this is going to be huge. You really need to go for this.'"

Handley certainly went for it, and PittMoss is set for unbridled growth in the coming years.

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**MONT HANDLEY
FOUNDER**

