

Women's Work

*Ann Adams and Liz Brensinger of
Green Heron Tools.*

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Photography by Mitch Mandel*

Try to name some gardening tools made specifically for women. Pink ones don't count. Think of any? If you did, tell Ann Adams and Liz Brensinger of New Tripoli, Pennsylvania, because they'd like to sell them. In 2008, they founded [Green Heron Tools](#) to offer high-quality, sustainably made gardening equipment to women gardeners and farmers. But they ran into a snag that sounds like the setup to a joke: Two women start a company to sell women's tools, then can't find any to sell.



"We thought that there were tools out there for women; we just had to find them. But we couldn't," says Brensinger.

Why should women's tools be different from men's? Pink handles aside, aren't tools unisex anyway? Not really. Women use tools—particularly long-handled ones like shovels or hoes—differently than men do. The reasons: A wider pelvis means a woman's center of gravity is closer to her hips, whereas a man's broader shoulders put his center of gravity higher. And proportionally, women have greater lower-body strength than men, but less upper-body strength. This means women rely on the power of their legs, not their arms, for strenuous tasks like digging.

Since most gardening tools are designed by men for men, they are too large for the majority of women, leading to strain, fatigue, and injury. Yet women may not realize just how unnecessarily hard they are struggling, because there have been no other options.

So Adams, 67, a former nurse, and Brensinger, 53, who worked in public health administration, decided to design a shovel. They had been market gardeners for 13 years, so they knew the kinds of stresses gardening puts on the female body. They call what they came up with HERShovel (HERS), a shovel/spade combination that is ergonomically engineered to maximize the power of a woman's body and make digging less taxing.

Adams and Brensinger applied for, and got, a USDA Small Business Innovation Research grant. They studied what changes were needed to make a tool easier to use, so that it compensates for the woman, rather than the other way around.

This doesn't mean simply taking a big tool and making it smaller. It acknowledges women's lower center of gravity and lower-body strength, crucial when bending and lifting. And it takes into account a woman's narrower shoulder span, smaller hands, and weaker grip.

An online survey and female-only focus groups told Adams and Brensinger what they didn't like about the tools they used: too heavy, too long and awkward. Working with agricultural engineers and a specialist in ergonomics at Pennsylvania State University, they designed and tested various prototypes. The HERS shovel/spade hybrid that resulted features an angled blade because "women don't use a shovel the way men do," Adams says. "Men power straight down. Most women can't do that. Women put the shovel blade into the soil at an angle and take small bites."

Once they had a prototype, it was time to test the theory that a properly designed shovel is less tiring to use. Subjects donned oxygen sensors to measure the energy expended using the HERS shovel prototype versus others, and started digging. The proof was in: HERS required less effort.

HERS weighs less than 4 1/2 pounds and comes in three shaft lengths. Its foot tread is larger than the norm. The hollow, D-shaped handle is tilted for leverage and textured to reduce slippage. Every part of the shovel is sourced and made in the United States. If HERS is a success, the pair will develop more long-handled tools.

Next on the women's list: redesigning the rototiller. In a survey, female farmers said it was one of the most frustrating tools to use.

Adams and Brensinger didn't start Green Heron Tools to get rich, but to fulfill a vocation: to make women's lives easier and better, and to bring more women back to the land. "It's a public health issue," Adams says. "If women can garden without pain or risk of injury, they can garden longer. I want to be able to garden for the rest of my life," she says. Millions of women hope they will be able to, as well.

Here's a video from the women of Green Heron Tools about the proper way to use a shovel:

