



Tools of the Trade: Hoop Houses

High or low tunnels, greenhouses or garages—hoop houses are handy structures on hobby farms.

Photo courtesy Four Season Tools

All hoop houses have steel, PVC or poly-pipe "hoops" that support a flexible cover. I just built my first hoop house. OK, it isn't what you might think of when you think hoop house; it's really what's called a low tunnel. In my case, I bent steel electrical conduit using a hoop bender from Lost Creek Greenhouse Systems. However, in all respects, my 4-foot wide, 4-foot high, Agribon-fabric-covered structure is as much a hoop house as a 30-foot wide, plastic-covered greenhouse or fabric-tension garage.

What all of these structures have in common is simplicity of design that uses steel, PVC or poly-pipe to create half-circle or "hoop" supports for a flexible cover. How the hoops are fixed in place and how the cover is secured are all that really differs. Whether covered with plastic or heavy-duty woven fabric, properly tightened and anchored, a hoop house can withstand high winds and a heavy snow load. The hoops themselves can vary from PVC pipe to steel electrical conduit to a range of steel and wood components. Using wood, concrete, gravel or earthen pads, the structures are fast to erect and low in cost compared even to pole barns.

Photo courtesy Farmtek

Hoop houses are particularly valued for their year-round food-production capabilities. Hoop houses have already earned a home on many small, hobby and large, commercial farms alike for crop storage, livestock shelter and equipment storage. Hoop-house designs are particularly appealing for year-round food production.

"In my opinion, the hoop house is the No. 1 technology for market and home gardeners, and interest in them is exploding," says Steve Upson, horticultural consultant for The Samuel Roberts Noble Foundation, a nonprofit agricultural research organization. Since 1995, Upson has been working with, improving on and spreading the word about hoop houses: "They aren't new, but they are being adopted today at a phenomenal rate. Their use cuts across philosophies of growing, regardless of what inputs you use for managing fertility or disease. Everyone can use hoop houses."

Year-round gardening expert Eliot Coleman agrees wholeheartedly. He's been using stationary hoop houses for years to extend his market-garden production and sales season. His high tunnels, when used in conjunction with low tunnels inside, extend his normally short, Maine-seacoast growing season into a year-long endeavor without the need for additional heat production.

Hoop House Hot Spots

Find products and information here:

Eliot Coleman's Four Season Farm

www.fourseasonfarm.com

FarmTek

www.farmtek.com

800-245-9881

Four Season Tools

www.fourseasontools.com

816-444-7330

Lost Creek Greenhouse Systems

www.lostcreek.net

903-569-8541

The Samuel Roberts Noble Foundation

www.noble.org



580-223-5810“High tunnels have the effect of moving the plants about one and a half [USDA hardiness] zones or 500 miles south,” he says. “Put low tunnels covered with Reemay [polyester fabric] over the plants inside the high tunnels, and we’ve moved the plants another 500 miles south.”

Coleman has modified the concept by placing interior bracing on the hoops, as well as skids or wheels on their bases, to create a movable high tunnel that he can place over an early planting of warm-season crops, like tomatoes, that would normally struggle to mature in the cool Maine summer. As they finish production in mid-October, Coleman moves the hoop house over an August-planted cool-season crop to protect it through the late fall and early winter. As those crops are harvested, beds are replanted with late-winter and early spring cool-season crops. As they mature, the hoop house is again moved to receive summer-crop transplants. The benefits of this system include the ability to rotate in-ground beds for disease control and fertility.

“The real benefit of these movable high tunnels is the flexibility,” says Greg Garbos, president of Four Season Tools. “They just make greenhouse production a different game altogether.”

Garbos has worked with Coleman to commercialize and market the movable hoop-house design. “To be movable, they have to be really rugged and structurally sound,” he explains. “As the unit is moving, you don’t want it to twist, so we add more braces than in a typical high tunnel.”