



"It's varmint-proof and low maintenance," says Jeff Bahnc, who raises 500 hens in this high tunnel, moveable "hoop coop".



Waterers, feeders, nesting boxes and roosting perches are all hung from the hoop house structure.

Hoop House Chicken Coop Takes Pasture Production To New Level

Jeff Bahnc's high tunnel "hoop coop" takes pastured poultry to a new level. His 500 hens lay eggs, "spread" their own manure, and are never bothered by predators or weather. The chickens are totally enclosed, yet are free range and get fresh pasture every other day, thanks to the moveable hoop house Bahnc bought from Four Seasons Tools.

"The structure is varmint proof," he says. "And it's low maintenance. The waterers, feeders, nesting boxes and roosting perches are all hung from the hoop house structure. When it is time to move, all I have to do is hook up the tractor and slide it forward."

To move the "coop" house sideways, Bahnc raises the side frames and slides 3-in. pvc pipe under them in 4 places. He then rigs 6 pairs of chains, attached to the side of the house, in a series of equilateral triangles; the first three sets are secured to the side of the coop. The second two triangles are secured to the first three sets of chains. A final triangle of chains attaches to the second set of chains.

He then hooks his tractor to the point of the last triangle and slowly moves ahead. This distributes the pulling force evenly to all 4 points on the coop house frame. Spreader bars between the sides transfer the pull to the opposite side.

Regardless of which way he pulls the house, one thing is always the same. The nearly 500 hens get excited and crowd toward the sound of the tractor. They know fresh grass and fresh bugs are coming.

Bahnc likes the low-labor system. "I get up a little before dawn and walk out to let down the doors on the laying boxes," he says. "Then I go back to the house for a cup of coffee. At about 10 a.m. I stop by the coop to close up all but two laying boxes, fill the feeders and pick the eggs. They will have laid about 95 percent of their eggs by then."

The flock averages 33 dozen eggs a day, and Bahnc notes that they're all spoken for before they're laid. He sells them to several outlets, including a local deli chain that specializes in locally produced food.

Bahnc credits Greg Garbos of Four Seasons Tools for giving him a structure he could work with that fit the chickens' needs. Side walls were modified to only 5 ft. tall, and the overall structure is 20 ft. by 48 ft. Galvanized 1 1/2 by 2-in. mesh screening wraps around the entire house with an entry door for Bahnc. To shade the chickens, he used 75 percent shade cloth over the top of the house.

The hens quickly trained themselves to follow the advancing side into fresh grass. Initially Bahnc was concerned they might get pinned by the following edge of the moving coop. He designed swinging panels to encourage them along, yet allow them to escape if necessary.

"The lower pipe on the frame is 12 in. off the ground when the home is moving," explains Bahnc. "I used pipe strapping to fasten 2 by 8's to the pipe so they would keep the chickens in, yet they could flap with the contour of the ground. If a hen gets trapped against them, they will swing out of the way, and she'll get outside, but she won't

get squashed."

Garbos says Bahnc and his wife Alethea are the first customers to use a moveable hoop house for chickens. He doesn't expect them to be the last.

"We sold them the frame, and Jeff and Alethea added everything they needed for the chickens," says Garbos. "It worked so well we are going to offer a kit with everything needed."

For Bahnc, a carpenter in a depressed economy, the chicken hoop house was a no-brainer. "Work was slow, and this was instant income," he says. "My wife raises and markets purebred Berkshires and Tamworths for the pasture fed market, so we knew how to market. We knew there was a niche in egg production that this system could fill."

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He Uses Diesel Exhaust To Heat His Shop

If you're using a stationery power unit in your shop, you might as well also use it for heat. Paint Valley Parts owner Levi Miller built a heat exchanger for his machining, fabricating and welding shop that uses diesel engine exhaust to heat water that runs through a radiant floor heating system.

"We run a 275-hp Deere diesel engine," Miller explains. "Exhaust temperature entering the exchanger is 550 degrees and it leaves the exchanger at 250 degrees. We produce approximately 650,000 btu's and are presently heating a 12,000 sq. ft. building with heat to spare." Without adding any heat over the weekend, the building only loses 10 to 15 degrees at 0 degrees outside.

"The heat produced is directly related to the horsepower used. Each horsepower will produce approximately 2,540 btu's," Miller says. "These heat exchangers are very efficient and they can be used in many differ-



Heat exchanger uses diesel engine exhaust to heat water that runs through shop's radiant floor heating system.

ent ways."

For example, they can be used for paint room and dry kiln heating, as well as heating a home. Miller adds that the heater core is stainless steel and needs to be cleaned every 45 to 60 days for maximum efficiency.

Miller's setup drew enough attention that the company now sells four sizes of heat exchangers. The company customizes units for each location, offering automatic con-

trol boxes for 12, 24 and 110 volts.

Sizes range from the Model 1500 (650 lbs.) for 25 to 80 hp engines to Model 6500 (1,700 lbs.) for 250 to 500 hp engines. Prices range from \$5,300 to \$14,000.

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Paint Valley Parts sells four sizes of heat exchangers and will customize units.

Simple Guide For Backing Up Trucks

As a guide for backing up his grain trucks to an unloading auger, Roger Gutschmidt of Gackle, N. Dak., uses an L-shaped (3 by 2-ft.) piece of steel pipe. He thought of an extra feature that makes it equally as useful when harvesting at night.

"I drilled 5/8-in. dia. holes, 3 in. apart along the long side of the L. At night I stick a flashlight in the end of it as it lays on the ground," he says. "The light comes out the holes, illuminating the guide so it can be easily seen from the cab in the

dark."

Gutschmidt lays the L-shaped guide down on the ground behind the back truck tire after he has successfully backed the truck up the first time. It also acts like a tire block so the truck can't roll back as easily.

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A flashlight can be stuck into end of L-shaped pipe at night for good visibility.