



Faced with high propane heating costs, poultry farmer Larry Morrison purchased this hay bale burner from Agri-Flame.



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Bale Burner Keeps Birds Warm, Healthy

When it cost Larry Morrison \$14,000 for propane to raise one 40-day flock of chickens last year, the Missouri poultry farmer knew something had to change. He purchased a hay bale burner from Agri-Flame, a company that got its start after reading a FARM SHOW article about a Canadian-made bale-burning stove.

Based on his experience with the stove late last winter, Morrison expects this winter's heating bill to be much cheaper. He already has a couple barns filled with \$10 bales and about \$1,500 worth of slab wood.

Besides fuel cost savings of up to 80 percent, he discovered a couple other benefits of his new heating system.

"I found out it wasn't as much work as we all thought," says Morrison who's nearly 70 and has health problems. "The other sur-

prise is how much better the air is and how much it improved the health of the birds."

Unlike the moist heat of propane, which works exhaust fans harder, the hydroponics system delivers heat through hot water lines and radiators, which produce a drier heat that Morrison feels is healthier for the birds. The flock he raised with his new system came in No. 1 out of 13 contract growers.

The \$85,000 system includes a 10 by 8-ft. furnace with a 7-ft. door to load round hay bales, a 4,000-gal. water tank, water lines, and five radiators with fans for each of Morrison's four 40 by 400-ft. chicken houses.

As he operated the system for the first time, the Monett, Mo., farmer learned a few things. First, hay bales must be kept dry at 15 percent or less moisture. However, the stove will burn green wood slabs once the

fire is hot. Morrison can pick up both bales and wood slabs inexpensively where he lives. Alternating wood with hay dries up the creosote from the wood, avoiding problems. The stove is also capable of burning regular firewood and bales of other dry, biomass materials.

In cold weather Morrison burned 4 to 5 bales a day. He put in 2 at a time for overnight and added another bale at 3 a.m. This year he may use more wood slabs overnight.

"I use propane as a backup," Morrison says, noting it didn't kick in much last year, but is an important - and required - safety backup.

With a USDA energy grant paying \$25,000, and hopefully continuing to earn higher prices for healthier chickens, the sys-



There are five radiators - one for each of Morrison's chicken houses.

tem should pay for itself faster than expected. He's willing to talk to other producers who have questions about hay-burner heating systems.

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No-Mess Waste Oil Furnace

If you burn waste oil, the Handi-Tank can save you time. The simple-to-install kit with screen, stand pipe, barrel stand and valve turns any 55-gal. barrel into a filtering system. Add a float valve, and you eliminate the mess and hassle of oil storage and transfer.

"The Handi-Tank filters particles greater than .002 in. out of the oil, while the stand pipe in the bottom allows water, antifreeze and sludge to settle out," says Scott Robinson, Chippewa Valley Alternative Energy (CVALTE). "Add our float valve, and you have a continuous flow of filtered oil to your heater reservoir. The kit stand sets the barrel high enough so oil gravity-feeds to the furnace."

Robinson and his wife own and operate CVALTE, selling and servicing Kutrieb and Aladdin waste oil heaters, parts and accessories.

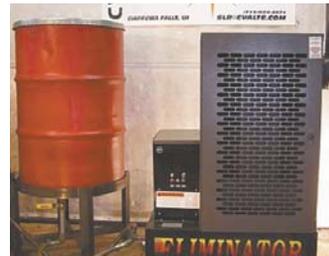
"We married the float valve we sell on heaters to the Handi-Tank. It makes for a great way to handle waste oil," says Robinson. "You get

away from having cans sitting around, and it's easy. You can dump in a bucket of waste oil with dirt, paper, dead mice, whatever, and only the oil flows through."

The filter sits in a basket that's sized to fit standard 55-gal. barrels. Installation is simple. The user cuts and deburrs a hole in the bottom of a barrel and installs the kit, which includes a 5-in. standpipe and a 2-in. bung with a valve. Install the float valve in the nearby waste oil heater, and the system is good to go.

Cleaning the Handi-Tank is easy, too. When the filter gets clogged, pull the basket and let it sit at an angle to drain the oil out of the sludge. Scrape the sludge off, and spray the screen with a degreaser. Reset the basket, and it's ready to go. Periodically, bleed off water that has collected beneath the standpipe and scrape out sludge in the bottom of the barrel.

Robinson says the Handi-Tank works well with waste vegetable oil as well. "If I am using vegetable oil in my waste oil heater, I'll use



Any 55-gal. barrel can be turned into a filtering system with the Handi-Tank.

two Handi-Tanks," says Robinson. "I put a belly band heater and bubble wrap around the one with vegetable oil to warm it up. Meanwhile, I start up with waste oil, and when the vegetable oil is warm, switch over to it."

Robinson says if a single tank is being used, a user can also place a magnetic crank case heater under the inlet screen of the reservoir heater. This should warm the vegetable oil in the heater tank enough to run through the heater. Depending on the temperature and the



System filters particles greater than .002 out of the oil.

size of the room and the heater, it will warm the vegetable oil in the tank back to a fluid state.

Robinson sells the Handi-Tank kit for \$455. The float valve is another \$65. If a customer orders the Illuminator 120 waste oil furnace (\$2295) and a Handi-Tank, the float valve is included at no extra cost.

Contact: FARM SHOW Followup, Chippewa Valley Alternative Energy, 1204 Superior St., Chippewa Falls, Wis. 54729 (ph 715 924-4871; or 866 460-8656; www.cvalte.com).

Alarm Lights Up When Propane Low

Introduced at a recent national propane dealer's convention after 3 years of development, this new monitor lights up when a propane tank is down to 25 percent of capacity.

The monitor is easy to install, and the cone-shaped light is visible from all angles. Chris Clabaugh, inventor, says there have been other devices on the market to signal when a tank needs refilling but they were

expensive or required increased monthly fees.

His monitor simply bolts onto a tank's lifting lugs and wires to the tank's Remote Ready Dial. If a tank doesn't have a Remote Ready Dial, the dealer will install an adaptor. The alarm is powered by a sealed battery with an expected battery life of 5 years or more. Clabaugh says the battery is not replaceable due to UL safety codes.

Called "Tank Q", the alarm is available only through propane dealers at this time. They sell for about \$35 a unit to dealers.

Contact: FARM SHOW Followup, Chris Clabaugh, Tank Q Ltd., 5150 North Point Dr., Port Clinton, Ohio 43452 (ph 419 656-3209; www.tankqonline.com).

Alarm attaches to lifting lug on tank. It lights up when tank gets down to 25 percent full.

