

Corn Heat in Farm Buildings Becomes Hot Topic

PLC web news room

As alternative energy sources ride a wave of popularity, purchasing a corn stove for home heating anywhere in Minnesota or Iowa can be as difficult as scoring Super Bowl tickets.

The recent focus on corn stoves makes Randy Severson of Pocahontas, IA, seem like a visionary. For seven years now, Severson has been burning corn to heat his farm shop, using a furnace of his own design. Now his new company SAR Biomass Energy Systems LLC markets his furnaces, including bigger models that will heat businesses and hog buildings.

“At one time Randy considered marketing the units on his own but, for one thing, fuel prices weren’t out of whack back then and it was hard to drum up interest,” says Jason Raveling, a partner in SAR. “I have a background dealing with bankers and regulators, so I walked away from a job with Cooperative Credit and for nine months chased paper to take this concept from an idea to a business.”

The new manufacturing company operates in a former auto dealership’s shop in Pocahontas. In addition to the three partners it employs five part-time employees.

Mastering a hard learning curve

Raveling explains how he, Severson, and Severson’s son-in-law, Theron Anderson, chose to target a commercial market for corn furnaces. “There are so many companies creating home models that it seemed more attractive for a young company to start with farms and other businesses, because there we have little competition.”

Admittedly the first year was hard, says Raveling. “With every application we installed we learned something and made adjustments to our product.”

Three of the original units went into pig nursery buildings operated by Wayne Hulsebus of Plover, Iowa. He uses the corn furnaces to supplement propane use in the buildings and estimates he’s cut his heating bill 30%. Hulsebus also uses one of the SAR units in his shop where he’s seen a 70% reduction in propane use.

According to Hulsebus, the SAR units are able to burn #2 corn and accept pieces of cob and fines. That’s because the SAR process burns hotter than the typical corn stove for home use, Raveling explains.

“We burn corn a lot hotter than most—until it becomes a slag like you’d get in smelting metal. There’s a red-hot coal with an inch of liquid on top that becomes our re-ignition source—our pilot light. All of our units run on a timed loop, and our forced-air models are thermostatically controlled.”

Patents covering the SAR process have been applied for. Raveling says if one of the units is installed in a commercial setting, it will pay for itself in three years.