

ASK THE AG TEAM, for the week of March 23, 2008

Emergency heat sources for your home –*by Jim Crawford, Natural Resource Engineering Specialist, University of Missouri Extension, Atchison County*

The recent ice storms left many people without electricity and without a source of heat for their homes. Although many of our homes are heated by natural gas, propane or heating oil, we oftentimes forget that they also need electricity to operate. Many have electric igniters for the burners. Even those that use pilot lights usually have a safety interlock which keeps the burner from lighting if there is no electricity. And of course the fan motor, which circulates the warm air, requires electricity. Even if the burner lights, the heat delivery system will not work.

As people were scrambling for alternative heat sources, I fielded many calls about the advantages and disadvantages of various heaters. Many of the inquiries asked about corn stoves as an alternative heat source. While these are an efficient source of heat, they also require electricity to operate the feed auger as well as the circulating fans so they are of no use during a power outage.

There are three main heat sources that do not require electricity to operate: portable kerosene heaters, unvented gas heaters and wood stoves.

Kerosene Heaters: Unvented portable kerosene heaters have been popular for several years. They provide considerable heat from a small unit, can be moved from room to room, and there is no cost of installation. They produce a radiant heat, and work best when set near the center of an open room. On the negative side, they require regular fueling, and you must have proper storage for several gallons of fuel. You must allow the heater to cool down before refueling, and spilled fuel is a potential hazard. These heaters are very particular about fuel; use only 1-K kerosene. Since this is an unvented flame, it is depleting oxygen from the air and producing waste gasses even when operating properly. In most older homes, there is enough air infiltration to keep this from being a problem, but extra ventilation may be required in a tight, well insulated home. Proper maintenance of the heater is very important for efficient, clean burning.

Unvented Gas Heaters: These heaters have gained popularity in the last few years. They produce a large amount of heat from a small package. Installation is cheap and easy; they can be wall mounted or set on the floor anywhere that a gas line can be run. Hooking to a natural gas line or a large propane tank eliminates the problem of refueling. Some of these heaters have an electric fan to provide better air circulation through a larger area. The fan is not required for operation, however, so the unit can still be used during an electric outage. These heaters work best in a home with a fairly open layout to allow for heat circulation. As with the kerosene heaters, the flame depletes oxygen and produces potentially dangerous waste gasses. In addition, the potential exists for a gas leak. Always follow the manufacturer's recommendations for ventilation.

Wood Stoves: Wood is a readily available fuel on most farms. Most of us need to cut a certain amount of wood to keep our fields and fence rows cleaned up, and it makes sense to use this for home heating instead of burning it all in a brush pile. Cutting stove-length wood does require additional work and time, however. A wood stove also requires a good chimney. If you already have one, stove installation is fairly economical. If chimney installation or repair is required, the cost goes up sharply. Wood stoves are somewhat difficult to regulate, and require regular loading. There's also the mess in the house from carrying wood in and ashes out.

While a majority of people cut their own fire wood, many people must purchase wood for their stove or fireplace. Firewood must, by law, be sold by the cord or fractional part of the cord. A gross cord of firewood is the amount of wood stacked and well stowed and contained in 128 cubic feet (which equals a stack of wood 8 feet long, 4 feet wide and 4 feet tall.) If you are purchasing cordwood for use this year, make sure it is dry seasoned wood. For more information stop by your local county Extension Office and ask for MU Guide G5452, How to Buy and Sell Cordwood.

Regardless of which heat source you choose, you must plan in advance. Wood stoves require a supply of dry, seasoned wood that should be cured for a minimum of 8 months before burning. The chimney also needs to be regularly inspected before use. Kerosene and propane heaters also require fuel, which you should have properly stored ahead of time so it is ready during an emergency. You should be familiar with the operation of your heat source BEFORE you need to operate it. Read and understand the operator's manual ahead of time. Start and use the appliance at the beginning of the heating season to make sure it is in proper working order. If you find a problem this will give you time to get it corrected before it becomes your sole source of heat.

Any of the above heaters can be used safely and effectively for emergency heat. Each has its own set of disadvantages and hazards, however, and no one type is best for all situations. In all cases, the house should be equipped with battery operated smoke detectors and carbon monoxide detectors to provide you with early warning of a dangerous situation. Several guide sheets and publications are available through your local Extension center which addresses some portion of this topic. Guide sheet G1999 addresses kerosene heaters; sheets G1730 through G1735 cover wood stoves and chimneys; sheets GH5117 and 5118 address emergency heating. For more information, ask for manual NRAES-9, "Home Heating in an Emergency," available for \$8.00.