

# Keep Heating Dollars From Disappearing Into Thin Air

UNIVERSITY PARK (Centre Co.) — Air leaking into or out of your home can bring you higher heating costs in winter, but there are inexpensive, do-it-yourself ways to stop drafts, said a housing expert in Penn State's College of Agricultural Sciences.

"All homes, regardless of age, design or location, are prone to uncontrolled air movement, called infiltration and exfiltration," said Dr. Phyllis Adams-Barner, associate professor of agricultural and extension education.

"Knowing where to look for these air leaks is the first step," she said. "They are most likely to occur where heated and unheated areas of the house are joined."

Common problem areas include window frames and sills, door frames, door sill plates and thresholds and attic entryways. "You also should check where the porch meets the house, where faucets, pipes or electrical fixtures penetrate the house shell, and where chimneys meet sidings,"

## Is Winter Weather Drying Out Your House?

UNIVERSITY PARK (Centre Co.) — Even if there's snow on the ground and the weather is frigid, your home may be drier than a desert this winter, said a housing expert in Penn State's College of Agricultural Sciences.

"Warm air holds much more moisture than cold air," said Dr. Phyllis Adams-Barner, associate professor of agricultural and extension education. "When the outdoor temperature drops, so does the air's ability to hold moisture. During the heating season, a home's relative humidity can be 15 percent or lower. At this point, the air in a home is drier than that in the Sahara Desert."

Excessive dry air inside your house can affect your health and cause a variety of other problems. "People living in very dry homes may experience sore and raspy throats, dry skin and stuffy noses," Adams-Barner said. "They can feel cold when the temperature indoors registers 70 degrees."

A lack of moisture also affects interior furnishings. "Doors will warp and wooden panels will shrink," she said. "Furniture tends to dry out, crack and shrink at glue joints. You'll receive static electricity shocks when touching metal after walking across a carpet or rug. Also, plants wilt and die more rapidly due to increased evaporation from their leaves."

Relative humidity gauges available in stores will give an accurate reading to within 10 percent. "A relative humidity level of 30 to 50 percent will provide a comfortable home environment," Adams-Barner said. "If your home has a lower relative humidity, consider adding small amounts of moisture to the air."

Moisture can be added to dry air in several ways. "Moisture vapor from a single source travels quickly," Adams-Barner said. "Boiling a teakettle of water on the stove, for instance, will add moisture to the air throughout your house."

Moisture accumulation also results from everyday activities such as bathing, cooking and washing clothes. "If the humidity in your house is too low, don't run an exhaust fan after each bath or shower," Adams-Barner said.

Special products are available to put water vapor into the home's heating system. "Reducing the in-

Adams-Barner said.

Caulking and weatherstripping are inexpensive and effective methods of preventing air leaks. "These strategies have proven to be more effective in reducing heating costs than increasing attic insulation or installing a new heating system," Adams-Barner said. "They help eliminate air leaks, reduce heating bills and make a home more comfortable. A wide variety of caulking and weatherstripping materials are available, each differing in price, performance and durability."

Caulking compounds are used to fill cracks and crevices. "These compounds are made of latex, silicone, butyl or other materials," Adams-Barner said. "Each type of caulk is formulated for a specific use, and their cost, durability and ease of installation vary. Shop around to find the product that's right for your situation."

Weatherstripping works on the same principle as the seal around a refrigerator door. "It stops air

door temperature is another way to increase the relative humidity and increase your comfort," she said. "Portable humidifiers also can do the job depending on the size of the home."

It may be necessary to add moisture to the air periodically throughout the heating season. "Depending on the type of heat you use, you may need to add moisture to the air frequently," Adams-Barner said. "But remember, too much moisture also can be a problem. To be on the safe side, check the relative humidity level frequently and make adjustments as necessary."

leaks through adjacent moving parts, such as door and window jambs or the bottom of a garage door," Adams-Barner said. "It's available in a variety of materials and shapes, including felt, foam, rubber and V-strip. These materials also can be used to fill large gaps where caulking isn't sufficient."

Always read and follow manufacturers' instructions when installing caulking or weatherstripping. "Many of these materials

contain hazardous chemicals," Adams-Barner said. "Use gloves, respirators and eye protection when directions indicate a potential hazard. Never lick your finger and smooth out a caulking surface, because you could accidentally ingest the materials."

Adams-Barner also warns that making changes to the shell of a dwelling alters the way a house previously functioned.

"Homes that have been caulked and weatherstripped usually have

more uniform temperatures throughout the house and are free from drafts," she said. "But they also may need a controlled source of ventilation to supply oxygen and remove moisture and contaminants from the air. Heating appliances may require an additional air supply to operate properly."

For more information about housing ventilation and weather proofing, contact the Penn State Cooperative Extension Office in your county.

## Extension Launches Work And Family Newsletter

NEWARK, Del. — Delaware Cooperative Extension is launching a newsletter this month called *Balancing Work and Family*. The 12-part series is printed one page, front and back. Organizations and businesses are encouraged to duplicate and distribute the newsletter to their members.

"The newsletter, developed by Ohio State University Extension, includes basic information that all families can use," notes Maria Pippidis, University of Delaware Cooperative Extension home economics agent who adapted the series for Delaware. "Each issue handles a particular topic that is relevant to today's families as they try to juggle their work and family roles."

Each newsletter covers a specific topic. Included are issues on sharing responsibilities at home, making the transition from work to home, family communications, and avoiding the morning rush.

The *Balancing Work and Family* newsletter is one way that Cooperative Extension will celebrate Delaware's families during 1994, which has been designated the In-

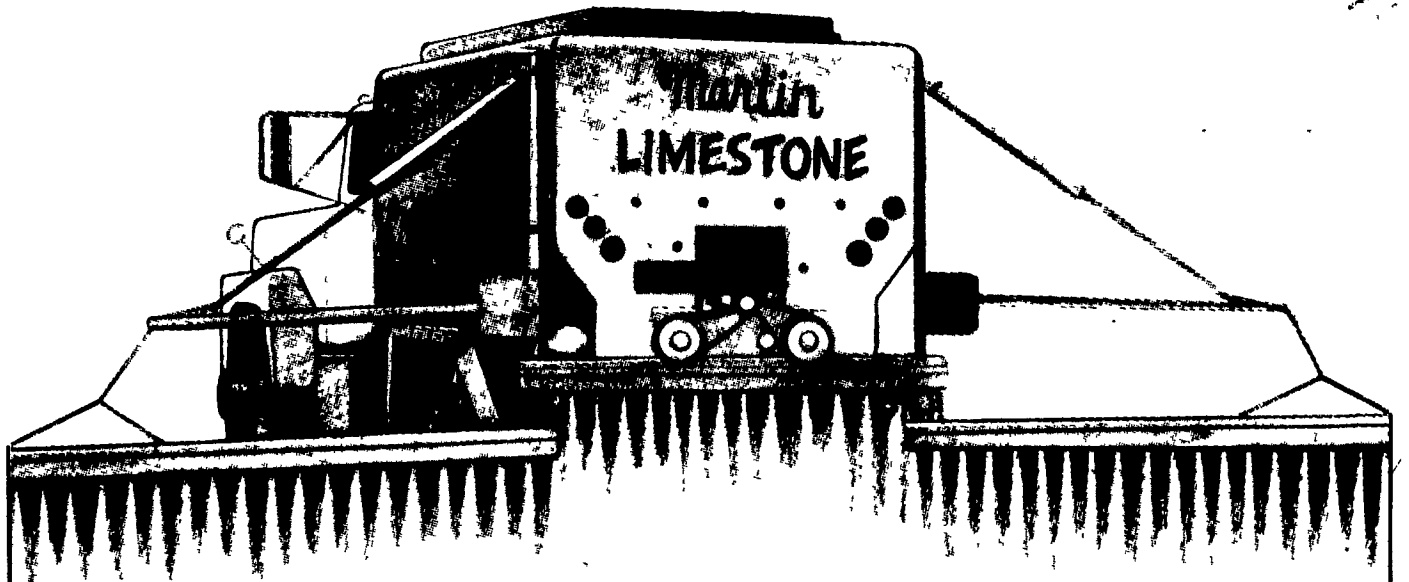
ternational Year of the Family by the United Nations.

Businesses, churches, schools and individuals may order the newsletter by sending a name, address and phone number on a post-

card with their request to New Castle County Cooperative Extension, 36 Townsend Hall, University of Delaware, Newark, DE 19717-1303. The newsletter is free.

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