



Answers to questions about structures, ventilation, soil, water, waste, energy, machinery and safety.

House moisture problems

Winter weather, energy-efficient house construction and a drenching rainstorm make a good recipe for unwanted moisture problems in the home. Winter weather promotes condensation by providing a wide temperature variation between the inside and outside of the house. Energy-efficient construction designed for holding in heat also traps the moisture. Rain downpours on the heavy clay Ozarks soils directs extra water into and under the house. Homes with crawl spaces are especially prone to water problems.

Several measures can be effective in reducing these moisture problems. First, make sure that yard water is diverted away from the upslope sides of the house by using a grassed terrace or retaining walls. Ground slopes should be 6 inches of drop per 10 feet of distance away from the house. Use gutters and downspouts to discharge roof runoff downslope. Without downspout extensions, each 1,000 square feet of roof area will drop 27,000 gallons of water next to the house over a year's time. Use an electric sump pump in the crawl space or basement if the house site is flat with no natural outlet for a tile drain.

Stop moisture evaporation into the crawl space by placing a 6-mil polyethylene vapor barrier on the crawl space floor and sealing the joint overlaps with tape, gravel, lime, or sand. This one measure can prevent as much as 20 gallons of water vapor a day from moving upward into a 1,400 square foot home. Keep crawl space vents open yearround to allow this water vapor to escape outside. For extreme water situations, bury a tile drain next to the foundation footing around the outside or inside of the house.

Also, provide 2 square feet of attic vent area for each 150 square feet of attic floor area to remove moisture that gets into the living area, and use exhaust fans in high-moisture bath, laundry and cooking areas. Be sure they are vented to the outside and not just into the attic or basement.