

Crawlspace and Mold

Mold can always be recovered from crawlspaces. Many are dirt-floored, and the soil is filled with fungi and bacteria. The pleasant odor associated with freshly turned soil is the result of volatile organic compounds released from these normal soil components. These odors could penetrate into the occupied space, but cannot be considered a significant health threat. As long as the soil and the crawl space surfaces remain dry, however, mold contamination should not be a problem.

The usual damp surface molds (species of penicillium and aspergillus, among others) can be common on crawl space surfaces. In addition, persistently wet crawl spaces can support the growth of wood-rotting fungi that not only destroy the wood, but also may produce fruiting bodies that release billions of potentially allergenic spores.

Mold can become a problem any time water enters a crawl space. Some crawl spaces are penetrated by ground water. The soil then becomes wet enough to allow amplification of some of the molds, leading to production of volatile organic compounds that cause unusual odors. Wet soil can also lead to condensation on other surfaces within the crawl space. Another source for water that can cause condensation is outdoor ventilation air. In the summer the crawl space is generally cooler than the outdoors. When humid outdoor air enters a crawl space, condensation is almost inevitable.

Other than the potential for wood rotting, you may not need to worry about the mold if the ventilation patterns in the house are such that air consistently moves from the house into the crawl space. If this is not the case, then odors and spores will penetrate the occupied space whenever air from the crawl space enters the home.

If the ventilation air is dryer than the air in the crawl space (i.e., if entering the crawl space is not going to cause the water in the ventilation air to condense on surfaces) then ventilation can be effective. Thus ventilation of crawl spaces is highly recommended in desert environments in order to keep a crawl space warm and dry. However, in hot humid climates, ventilation of a crawl space with untreated outdoor air is likely to make the problem worse.

The key to preventing mold in crawl spaces is to make absolutely sure that no water will enter that can either lead to wetting of the soil or to

condensation on surfaces. If this is not possible, then crawl spaces should be avoided. For existing crawl spaces, sometimes changing ventilation patterns can help remove water. If all the water is coming from the soil, the crawl space can be sealed so that no soil is exposed within the space. This should prevent condensation on surfaces, but mold will still grow beneath the sealant. If the sealant is not impermeable to volatiles, odors may remain a problem.