

Moisture Control and the Pest Control Operator

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One of the most important services that PCO's can provide to their clients is monitoring the moisture conditions in the crawlspaces, living areas, and attics of their homes and offering means of controlling it. Excessive moisture not only leads to the growth of mold and decay fungi but also is associated with increased insect activity and decreased indoor air quality. But few PCO's offer such services. Rather, they treat the consequences of excessive moisture without eliminating the cause.

When I give presentations to PCO groups, rarely are there more than a handful of those in the audience who indicate that they own a moisture meter. A variety of meters now is available for measuring the moisture of wood and other building materials. Most meters are relatively inexpensive and require little training to use properly.

Even with the warm, humid weather conditions that we have in Mississippi, the wood framing in a properly designed, constructed, and maintained home would not be expected to have a moisture content above about 15%. Since mold fungi require a minimum wood moisture content of about 20%, and decay fungi require 28 – 30%, the presence of actively growing fungi indicates that a moisture problem exists that must be corrected. A moisture meter must be used to determine if the fungal growth is active and to determine the source of the moisture. Roof or plumbing leaks usually result in a localized area of wood with an elevated moisture content. Widespread areas of excessively moist wood or active decay are the result of either condensation problems or the growth of water-conducting decay fungi.

Condensation problems usually are associated with moist crawlspaces. Warm, moist, unvented crawlspaces below air-conditioned living spaces often result in excessive moisture in the floor joists and subfloor, but such conditions also can occur on the roof deck in inadequately insulated, unvented attics. Widespread occurrence of molds and/or decay fungi in crawlspaces or in attics is an indication that the wood moisture content is excessive. Molds also often occur in closets without louvered doors in homes with severe condensation problems. Buckling of flooring and/or roof decking also may occur. Frequently, condensation occurs in older homes whose crawlspaces are enclosed during remodeling. The probability of condensation will be minimized if moisture is decreased in crawlspaces by increasing foundation ventilation (minimum of one square foot per 150 square feet of crawlspace), installing a soil cover (70 - 80% coverage in existing structures), redirecting the drainage of the site outside of foundation walls (or concrete slabs) with French drains and/or berms (on sloped lots), and eliminating vegetation closer than 18-inches to foundation walls. In some instances, it may be necessary to install fans (especially in below-grade crawlspaces) that are on timers to cycle on and off during the daylight hours and off at night. It is a good practice to periodically visit your clients' homes during rains to observe whether gutters and downspouts are working properly and to assure that water is not collecting near foundations on one or more sides.

Decay and excessive moisture caused by the growth of water-conducting decay fungi, though frequently widespread in floor joists and subflooring, often radiate from the area where the fungus initially became established. This frequently is associated with an earth-filled porch, flower planter, patio, etc. Use of a moisture meter usually will demonstrate where the fungus originated. When the source of moisture is located, eliminate it, treat the adjacent foundation wall (and interiors of blocks) with borate, place fans in the crawlspace directed at the affected wall, and replace all decayed wood with pressure-treated material.

The growth of algae (green growths) on foundations or lower siding materials indicates either excessive rain-splash or, if associated with downspouts, clogged drains. As a general rule, French drains located at roof drip lines are preferable to gutters and downspouts (except where roof runoff hits concrete walkways or other hard surfaces). No mulch or foundation plantings should be within 18-inches of foundation walls.

Those of you who do not offer this service should seriously consider adding moisture management to your list of benefits of doing business with you. Whether you realize it or not, this is a potential source of income that also will provide significant benefits to your clients.

Additional Reading - available from author

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