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## UTILIZATION OF BLUE-STAINED LUMBER

Blue stain in sapwood is not a stage of decay. It is due to the presence of fungi quite different in their action from those causing decay. Only in severe cases of staining are the strength properties lowered and even then only toughness is affected to a practical, significant extent. Nevertheless, blue stain is looked upon with suspicion and blue-stained lumber is frequently discriminated against, primarily because fungi causing decay may be associated with the staining fungi, since both types of organisms grow under similar conditions.

Formerly kiln drying was the only completely effective method known of preventing blue stain. Within the last decade, however, certain chemical dips or spray treatments, which will usually prevent staining when they are properly used, have come into general though by no means universal use.

For many purposes blue-stained wood is fully as suitable as bright stock. In general, it need be discriminated against only for uses where its appearance would be objectionable or where strength is of prime importance.

Blue stain may be accepted in rough lumber, lath, scantling, plank, and some of the larger sizes of dimension. More could be used in the manufacture of inside doors, trim, finish, millwork, and other products, when the discolored wood is to be painted or otherwise

hidden from view and where conditions of exposure permit the use of sapwood. However, since the presence of any fungus may indicate poor milling and seasoning practices, stained wood should not be accepted until it has been thoroughly examined and found satisfactory for the use intended.

As blemish in any degree would destroy the beauty of the grain of the wood, bright, stain-free stock is highly desirable for a large variety of uses requiring a natural finish.

### Surface Signs of Molds, Staining Fungi, and Wood Destroyers

The recognition of decay associated with sap stains is difficult, particularly when decay is in the early stages or when staining is heavy.

The fungi inhabiting wood and causing blemishes, stains, and decay may be classified as molds, staining fungi, and wood destroyers.

The molds are commonly found on sapwood and are characterized by cottony, downy, or powdery surface growths of various colors. Most molds cause no direct staining of the wood, but produce blemishes due to their variously colored surface growths. These blemishes are readily planed off and in some cases can be brushed off. The fungi that cause blue stain produce stains deeper in the wood which cannot be surfaced off, and are practically always confined to the sapwood. Under certain conditions most blue stain fungi produce on the surface of the wood minute but easily visible black stalks or flask-shaped bodies which are frequently topped with glistening white droplets containing numerous spores.

The wood destroyers are found in both heartwood and sapwood and are the direct cause of decay, rot, or dote. The surface growths of these fungi, when

conspicuous, are usually white, yellow, or brown in color, fluffy and glistening, or compacted into strands, fan-shaped patches, or definite surface crusts, and usually lack the powdery masses so common to the molds. The presence of toadstools, conk or bracket growths, or a decided softening of the wood are positive signs of an advanced stage of decay. Little or no softening may occur in the early stage of decay even though an appreciable decrease in strength may already have taken place.