

CONSUMER INFORMATION SERVICE ON CHECKING OF WOOD

"Why are my fence posts cracking?" "Why are my fence posts splitting?"

The above are common questions by the owner of a new wood fence. The actual reason follows.

Actually the fence posts neither "cracked" or "split", but rather underwent a process known as "checking", which results from the natural seasoning (drying out) of any piece of lumber but particularly in any full, round or square piece of timber.

The U.S. Department of Agriculture Forest Products Laboratory at Madison, Wisconsin has done considerable research on this subject. The following is quoted from U.S.D.A. Bulletin #1187:

Round items are considerably more difficult to season than sawed items. The difficulty arises because the round item contains the heartwood or center of the tree, frequently of large proportion to the whole, and the outer sapwood layer. The enclosure of the heartwood within the piece prevents the satisfaction of the inherent differences between tangential and radial shrinkage by distortion of cross section. As a consequence, stresses set up in different directions during drying. Thus, the item has a natural tendency to develop a V-shaped check toward the center.

In plain language - when a full round timber dries, the exterior surface (sapwood) shrinks faster than the inner (heartwood) heart of the piece, and something has to give. The result is the familiar "check" which is technically neither a split nor a crack.

Checking is much less visually evident, but still a possibility, in boards and planks (the form in which we see common lumber) because these timbers are normally cut from larger trees, and having been sawn four sides, exposure to the air and natural drying is more even and uniform.

Both laboratory and field tests tend to prove that the natural checking of full round materials does not materially affect the strength of the timbers.

Users of full round or square timbers (posts, rails, etc.) or dimensional members (posts, boards, slats, etc.) can be assured that the natural checking, which is almost certain to occur, will have no appreciable effect on the strength of that member.