

USFS working to create a stronger baseball bat

The U.S. Forest Service is intricately involved in the world of Major League Baseball.

The feds have been testing and analyzing thousands of shattered Major League bats, at the Forest Products Laboratory (FPL) to develop changes in manufacturing. It has resulted in decreasing the rate of shattered maple bats by more than 50 percent since 2008. While the popularity of maple bats is greater today than ever before, the number of shattered bats continues to decline.

The joint Safety and Health Advisory Committee of Major League Baseball and the Major League Baseball Players Association began working to address the frequency of bats breaking into multiple pieces five years ago. FPL wood experts looked at every broken Major League bat from July to September during the 2008 MLB season.

The research team found that inconsistency of wood quality, primarily the manufacturing detail "slope of grain," for all species of wood used in Major League bat manufacture was the main cause of broken bats. Also, low-density maple bats were found to not only crack, but shatter into multiple pieces more often than ash bats or higher-density maple bats. Called multiple-piece failure, shattered bats can pose a danger on the field and in the stands.

Slope of grain refers to the straightness of the wood grain along the length of a bat. Straighter grain lengthwise means less likelihood for breakage.

With the help of TECO, a third-party wood inspection service, the FPL team established manufacturing changes that have proved remarkably successful over time. Limits to bat geometry

dimensions, wood density restrictions, and wood drying recommendations have all contributed to the dramatic decrease in multiple-piece failures, even as maple's popularity is on the upswing.

The Forest Service research team has been watching video and recording details of every bat breakage since 2009. The team will continue monitoring daily video and studying broken bats collected during two two-week periods this season, working to further reduce the use of low-density maple bats and the overall number of multiple-piece failures.