

# Natural Edge Bowl Turning - Tom Buchner

## **Wood selection is critical.**

The wood in a tree has grown under different stress depending on the location in the tree, trunk vs branch vs crotch. Also whether above or below the pith line. Also for the trunk whether the trunk is vertical or leaning.

Reaction wood is part of the trunk where wood is altered due to the tree leaning.

Tension wood is located above the pith, so the wood is constantly being pulled by gravity.

Compression wood is located beneath the pith, so the wood is constantly being compressed by gravity.

Reaction wood can move up to 20 times more than non-reaction wood.  
Need to be

Wood with contrasting sap and heart wood can make for a more interesting bowl.

If wanting to turn a natural edge this can be with or without the bark. Some species hold the bark better than others. Best chance for the bark to hold is if the tree was felled in late fall or winter when the cambium layer is not active so minimal moisture in this layer.

The following diagram illustrates the common locations of tension wood and compression wood and the best ways to cut to minimize cracking in the bowl.

## **Cutting the tree section.**

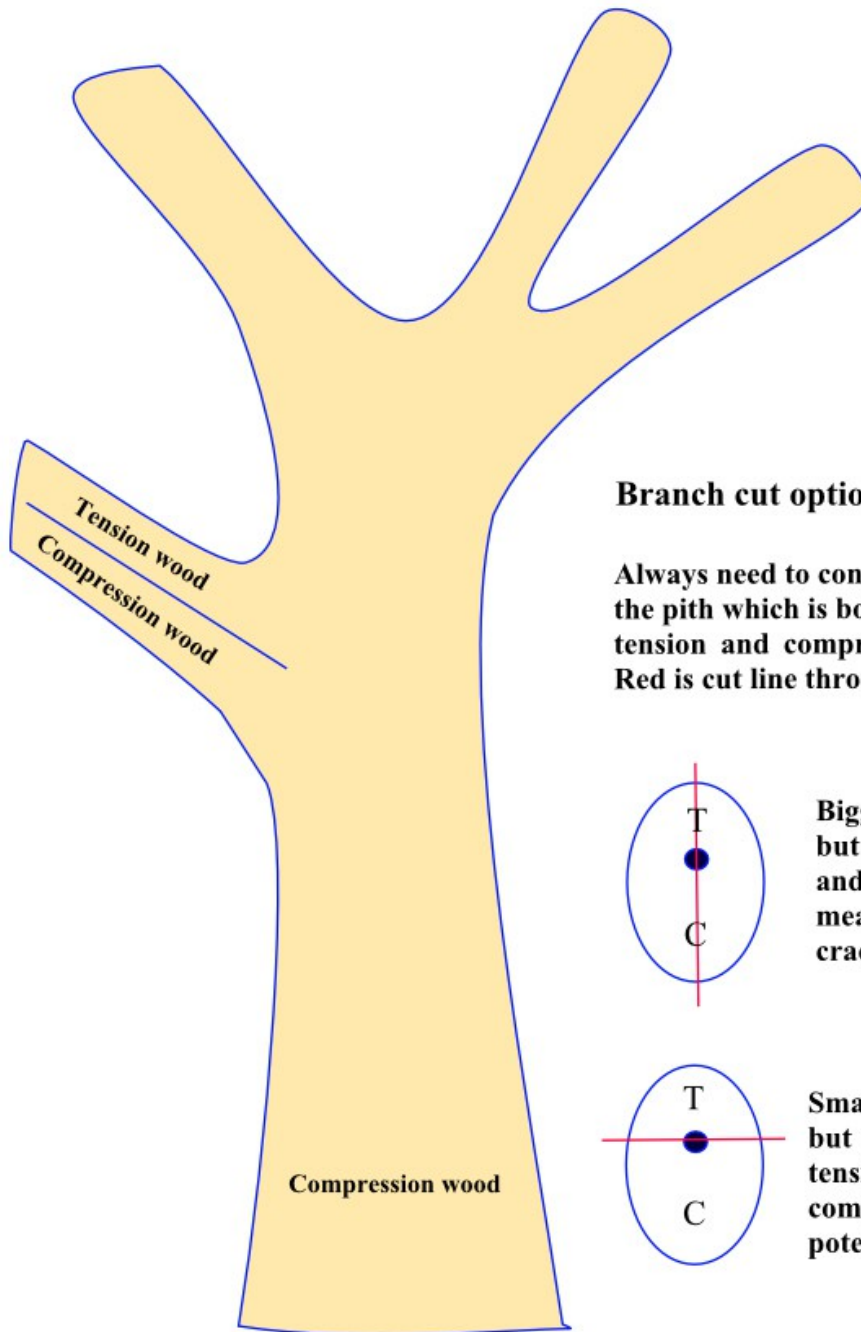
Orient the cut to balance the rim as desired.

If the tree section was from a branch, recommended to cut so the blank has all tension wood or all compression wood to minimize cracking as the bowl dries after shaping.

Make cardboard circle cutouts of various diameters so you can cut to get the largest diameter possible from the tree section.

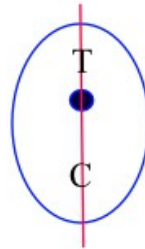
## **Turning the bowl.**

## Green wood diagram

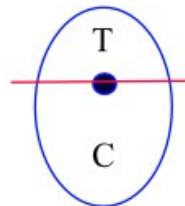


### Branch cut options

Always need to consider position of the pith which is boundary between tension and compression wood. Red is cut line through the pith.



Bigger bowl blank, but mix of tension and compression means potential for cracking



Smaller bowl blank, but each is either tension or compression so less potential for

Normally turn once then let the bowl dry. It will likely warp. If lucky it will not crack. Twice turning is not likely to work, at least not easily.

Turn between centers so that as you begin shaping, you can test the thickness of the rim and re-center as needed to get a consistent rim thickness.

Consider a 2 prong spur drive vs 4 prong. With a 2 prong drive, the prongs can be driven in parallel to the grain to provide the best holding power. With 4 prong style some prongs are cross grain and will prevent the drive from being driven as deep into the wood.

If you have a live center with removal point, it is best to remove the point. The re-centering mentioned earlier is often a small change, perhaps 1/16in. A point will want to return to the original hole. Removing will leave a ring which is easier to move small distances without the ring trying to go back to the earlier ring.

Every time the tool rest is re-positioned for any reason, always turn the bowl a few times by hand. It is important that ALL parts of the bowl clear the tool rest and banjo. Forgetting to check that the bowl is clear can cause major problems for the bowl and operator.