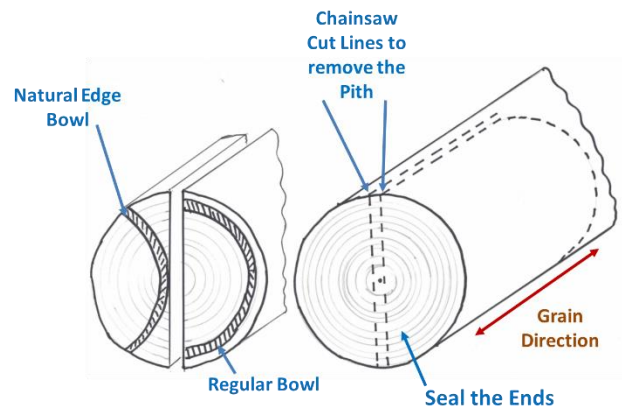


# Tree to Final Form - Notes prepared by Frank DiDomizio

## Harvesting Wood

- To help keep the bark on, harvest your wood when the sap is not running – from Oct to March
- Cut the wood to remove the pith, seal the ends as soon as possible and keep in a cool place out of the sun and lightly covered with a tarp if possible taking care not to promote moulding and rotting of the wood
- Use a band saw or chain saw to round up the blank before putting it on the lathe
- 



## Mounting a Piece

- To start roughing out a bowl blank it can be mounted between centers with a spur drive
- You can also use a screw chuck or faceplate
- If you are doing a large quantity of bowls you might consider making up a modified drive as shown in the demo



## Roughing out your Piece

- If you are roughing out a wet piece of wood, first turn the bottom of the bowl and create a tenon on it
- Then turn the bowl around, mount it in the chuck and turn the inside of the bowl leaving a wall thickness of approximately 10% of the diameter (slightly less recommended, particularly for larger sizes)
- Seal the end grain and then let it dry – air drying can take from 6 months to 1 year per inch of thickness
- If you turn your wood to ¼" or less even thickness, you can go from wet wood to final piece without going through a major drying process, but there will be wood movement. Full drying may take a few weeks or more. I will leave the piece in a box or a bag for a few weeks and then sand it and remove the tenon.

## Drying Methods

- The moisture level will be around 80% for freshly cut wood. It can go down to 30% at which point the free water is lost and cells start to shrink to cause wood movement (8% tangential, 4% radial, 0% along length). Cracking is caused by uneven loss of moisture, too much air movement (outer surface dries faster than the inner surfaces) and leaving wood too thick preventing movement
- Air drying: This is what the majority of people will use, leave in a cool place, with consistent temperature and not too much air movement. You can help slow down drying by putting the piece in a paper bag or cardboard box.
- Kiln: A low temperature method that most professional bowl turners use. Temperatures range from 28 degC to 32 degC and drying takes 6-7 weeks
- Vacuum: This is an industrial and costly process not really available to turners
- Boiling: Relieves stresses, breaks down lignum/cell structure, boil for 2 hours. Good for fruitwood such as apple



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- Microwave: Can be used for small one-off small projects. Does not work well on larger bowls
- Alcohol: 2 days of soaking, followed by 3 days of drying
- PEG/Pentacryl: Solution applied or piece is dipped. Plasticizes the wood and it is hard for finishes to adhere
- Soaking in/with soap (1/2 soap and ½ water) or Danish oil: The solution replaces the water, reduces cracking and movement. Good for fruitwoods like apple

## Finish Turning a Dry Bowl

- Mount the bowl on a soft pad (anti-fatigue matt)
- Turn or re-turn the tenon for the scroll chuck
- Turn the outside of the bowl (I use primarily the 55 deg swept back grind for this) and shear scrape as needed
- Shear scraping can be done with a regular scraper, a skew with the burr raised or with the bottom wing of the gouge held at approximately a 45 deg angle
- Reverse and mount the blank in the scroll chuck
- Finish the rim (angled is more pleasing than flat rim)
- Turn the inside of the bowl first starting with a 55 deg swept back grind and then moving to a 60 deg more traditional grind in the bottom area. It is important to maintain bevel rubbing throughout the cut to avoid tear-out
- Try to avoid having to do any scraping on the inside of the bowl as this will often just cause tear-out in many woods, which is then very difficult to sand out
- Sand all surfaces typically starting at 120 grit, down to 400 grit (do this at a low speed)
- To remove the tenon reverse the bowl and use jumbo jaws, a Longworth chuck, a soft pad, vacuum chuck or other method



## References

- Dale Larson (2016 AAW Conference)
- \*Glenn Lucas (DVDs, 2017 AAW Conference)
- \*Mike Mahoney (AAW Conference and DVDs)
- Stuart Batty (2015 AAW Conf. and Vimeo videos)
- \*Doug McGrath (discussions, demo, London, ON)
- John Jordan (excellent “Aesthetics and Properties of Wood” DVD), David Ellsworth, Richard Raffan (demos, DVDs, books)
- YouTube - AAW Screened or Recognized Turners and Woodturning Guilds

\* Production Woodturners

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