

Ask the Pro

Cross Grain Tearout

Between September 2009 and March 2010, the C.O.W. newsletter featured a forum in which members could ask the club's more experienced woodturners questions. What follows is one of the questions asked and the pros' answers.

When I do cross grain bowls I have trouble with tear out in the two areas where I am turning "up-hill". i.e. where the end grain is not supported by fibers below it when cut. What can I do to eliminate this problem or at least make it such that I can sand out any small pits?

Freddy Dutton:

To prevent tear out in crossgrain wood, the following techniques have worked well for me: On the outside of the bowl, use the left side pulling from the bottom to the top with a shearing cut. I use a bowl gouge that is sharpened, and on the inside of the bowl use the very sharpest side. Use the left side of a very sharp bowl gouge, and do a very light cut (two or three passes to remove the tear out) Also, take very light cuts to remove all the tear out In stubborn woods, apply some oil to soften the grain.

Floyd Anstaett:

Use a freshly sharpened gouge.

Use a freshly and properly sharpened scraper.

Make light finishing cuts with the gouge with the bevel rubbing and the cutting edge at a shearing angle of maybe 35 to 45 degrees to the material being cut. Cut from the small to the large diameter with the gouge if possible. Cutting from the large to the small diameter, if done with a light, shearing cut with a freshly sharpened gouge will also work. I probably cut from the large to the small diameters as often as I cut from the small to the large diameter. It's critical that the bevel is rubbing on the large to small cut.

Using a properly sharpened scraper in a shearing angle from the small to the large diameter will help to clean up the surface.

When sharpening a scraper one needs to remember that the existing burr is the edge that has been used and is probably dull and possibly broken. As a result, I like to lay the face of the scraper on a flat stone and remove the old burr and polish the surface of the scraper. Then I sharpen the scraper using the grinder, which raises a new burr. I then again lie the scraper flat on the stone and remove the new burr which leaves me with a perfectly sharpened edge at the junction of the top or the scraper and the bevel. I then raise a new burr using a light touch on the Veriitas bench mounted burnishing tool. All this messing

around with the scraper, if done correctly, will produce an extremely sharp, smooth and strong burr which if used in a light, pulling type shearing cut from the small to the large diameters will produce shavings and fluff and will probably do as much to smooth up the surface of your bowl as anything you can do.

One needs to remember that what you are dealing with here is both surface damage and subsurface damage since regardless of what you do you will be cutting against the grain at some point on the bowl. The sub-surface damage is what will give you fits. You can have a perfectly smooth looking surface only to wind up with a splotchy looking finished surface if only the surface damage is dealt with.

Proper sanding, and despite what some people will claim, quite a lot of it is the answer to a well-finished bowl. Using water between the grits to raise the grain is helpful as is sanding in both a clockwise and counter clockwise rotation if you are fortunate enough to have an electronic variable speed lathe. A reasonable amount of "back and forth" spot sanding by hand is also sometimes required.

[Jim Burrowes:](#)

Sharp tools and proper speed.