

What speed to use on my lathe?

This is the best answer I have found was contributed by Reed Gray June of this year. The following is his recommendations. The Highlights are mine.

Speeds are whatever you feel comfortable with. Do work your way up to higher speeds, don't just crank it up and plunge in. The RPM is just as important as the FPM (feet per minute). A 16 inch bowl fpm speed is very fast at 1500, on the rim, but much slower on a 1 inch spindle.

The blessing of variable speed is that with bowl blanks, you can start as slow as you want, turn it up till it starts to vibrate, then back it off a bit. **If you are turning while the lathe is shaking, the shaking will result in a bowl that isn't round.** Chainsawn blanks are never balanced, and even if you totally prepare your blank on a bandsaw, they are seldom balanced, so there will be some vibration. Some pieces never balance, just because.

I have 3 speed ranges on my lathe, low for big out of balance pieces (up to about 500 rpm), medium for most other pieces (up to about 1800), and high for spindles (almost 3000). I have no trouble starting with a 10 inch bowl at 1800 rpm. My lathe can handle that. **I will turn as fast as the lathe can handle without vibrating.** When it is balanced out, I turn the speed up. **Cutting is much easier for me at higher speeds, especially the finish shear cuts.** Turning smaller bowls in the 5 inch and down range seems slow at 1800, and I can see turning them at 3000, but I don't want to change the belt. I do wish there was a gear shift for lathes to make speed ranges easier to change. If there is bark on the piece, I will turn slower until almost all the bark is off. I have had pieces fly off. **If there are any cracks in the wood, I turn slower,** and/or stabilize the piece by filling it with super glue and dust. I will first hit it with the thin glue, then with the thicker glue, and wait for it to seep all the way in and cure before turning. I don't use the accelerators because the glue will cure on the outside, and not on the inside (super glue on glasses, cloths, and face shields isn't fun). I don't want pieces of wood flying off at 200 rpm any more than I want them flying off at 1800. It doesn't take a catch for a piece of wood that is cracked to come flying off at you. Even if I have glued a crack up, I will turn slower. Again, start slow and work your way up, as long as you are comfortable.

For sanding, I turn the lathe as slow as possible. I turn green to final thickness, then let them dry and warp. I had the minimum slow speed on my lathe set down from 50 rpm to zero. 50 rpm is too fast for a warped bowl. I can manage most of them at 10 rpm, but some I have to hand turn. I power sand, and have a piece of cork under the trigger to keep my speed down. **High sander speeds, and high wood speeds generate heat which can cause cracks and checking in the wood,** and your paper wears out faster. Slower speeds also do a better job of sanding, and it doesn't take any more time.