

How To Sharpen Tools

Keeping tools sharp saves time and energy.

When you're in a hurry to get your pruning work done, you may not want to take the extra few minutes needed to stop and sharpen your tools. But it's well worth the effort for two reasons:

- 1) Your work will go faster and easier with sharpened tools.
- 2) The clean cuts you get with sharpened tools are healthier for your plants and trees.

Immediately after being cut, a plant oozes sap or resin, which dries to create a protective shield. But that's just the beginning of the healing process. The plant also diverts energy from its growth to the damaged area while the wound is healing. Obviously, then, you want to help ensure that the tree will heal as quickly as possible. One way to do this is to make sure you create a smooth surface by a clean cut using a sharpened tool. Not only will the plant heal more quickly, and thus begin growing sooner, but it will be exposed to less damage from diseases, insects, fungi and weather extremes.

Following these steps will help you learn the proper way, then, to sharpen your pruning tools.

Step 1: Clean the blades

Whatever type of pruning tool you are using, clean the blade with a stiff brush and soapy water to remove any rust, clumped dirt or other debris. Dip the pruners in a solvent, such as kerosene, to clean off any sap. If you've used your tools on evergreens, be sure to clean off the pitch residue using either oil or kerosene, too. After drying them, wipe the blades with a light coat of motor oil.

Step 2: Examine the sharpness

Examine the blade edge to determine the correct sharpening angle (usually about 10 to 15 degrees) (see Photo 1, at left). It's also a good idea to check the manufacturer's guidelines for more specific sharpening instructions and cautions. Remember, for an anvil-type pruner, you'll sharpen only one blade but you must sharpen that blade on both sides.

The choice of sharpening tools is largely a matter of preference:

- * Whetstones, the most common choice, offer many gradations and sizes, though you may find that a longer one is easier to work with.
- * A diamond-coated flat file requires only water for lubrication, remains flat for fast sharpening and is durable enough to last a lifetime.
- * A sharpening steel is useful for finishing or for a quick fix.
- * Grinding stones require extra caution because they transfer friction heat that can affect the metal temper, making it more brittle.

Because the use of whetstones is the most common of these four types, we'll describe that technique in detail here.

Step 3: Begin grinding the blades

Start with a medium-grain whetstone (see Photo 2, opposite page, top). Thoroughly wet the stone by soaking it in water or a lightweight motor oil. (For an even lighter finish, some people prefer using a vegetable oil.) Because water quickly evaporates, oil is usually a better choice. It will not only act as a lubricant but carry away grit during the sharpening process.

To maintain the correct angle, press the blade against the concave side of the stone while sharpening. Use numerous smooth strokes, moving the blade in one direction toward the tipóas if you are trying to shave off a thin slice from the whetstone. Don't press too hard.

For every 10 strokes to the outer bevel, apply one stroke to the inner angle.

Keep the stone wet by periodically applying more water or oil. (Don't switch between the two, however. If you start with oil, continue using oil.)

If the blade has a nick, use a file to remove the bent metal piece. If it has multiple nicks, you may need to start the sharpening process with a coarser stone.

Step 4: Smooth the edges

Once you've achieved the proper angle and sharpness, move to using a finer-grain whetstone and continue sharpening until you achieve a razor-sharp edge. Don't reduce the beveled edge to less than 1-mm thickness. A finer edge will not increase sharpening ability but will make the blade more fragile and prone to damage or breakage.

Step 5: Test the sharpness

You can conduct a preliminary test without having to make a trip outside. Simply hold the cutting edge up to a light source. If you can see light reflecting off the blade edge, it's not yet adequately sharpened.

Once the tool passes the light-reflection test, you're ready for the ultimate test of trying it on the size of branch it is designed to cut (see Photo 3, at middle right). If you've sharpened the blades properly, they will make clean, easy cuts. If the blades pull or catch, they're not sharp enough. In that case, continue sharpening with the fine whetstone or switch to an extra-fine stone. Retest as necessary, again being careful not to over-sharpen the blades.

Step 6: Add a coat of oil

Finish off the blades by rubbing a light coat of oil them (see Photo 4, bottom right). Remember: dirt that sticks to your tools acts as a sponge, collecting moisture and causing rust. So be sure to keep dirt off your tools when they're not in use.

When sharpening other types of tools, you may need to make some modification of these steps. For example, when sharpening anvil-type pruners or clippers, sharpen only one blade but on both sides. Avoid putting a curve on the blade's edge. Unless the edge is perfectly straight, it won't strike true against the flat anvil, and strands of plant tissue will cling to the blade after each cut.

Before sharpening shears, you might find it easier to take them apart. Keep in mind that regrinding blades usually is not recommended. Doing so tends to change the cutting angle and destroy the fluting. Plus, regrinding can create a convex cutting edge that leads to poor shearing action and difficulty in cutting.

For scissor-action "bypass" lopping shears, sharpen only the outside surface of each blade. This will maintain the cutting surface so the blades will cut cleanly as they slide past each other. Remember that the inside blade surfaces need to remain flat, so you should clean them but not sharpen them.

When you're sharpening your tools, it's also a good idea to check the tension screw between the blades. If needed, adjust the screw to allow more freedom of movement while still ensuring that the blades are close enough together to work properly.

What if you have a saw that needs sharpening? That's a tedious job that takes special skills and special equipment, so you'll most likely want to leave it to a professional. Check the Yellow Pages under "Sharpening services" or try a local hardware store.

After you've sharpened a tool several times, you may notice that the cutting angle is becoming rounded (an edge that is more than a 90-degree angle). At this point, the blades start working with a crushing action instead of a clipping action. This indicates the blade is worn out, and it's time to replace it or the entire tool.

Protect your investment in quality tools and limit the need for sharpening by performing routine maintenance between uses. Find a handy, easy-to-reach spot to hang up a rag that's dry on one end and has oil on the other. Use it to wipe off your tools, keeping them clean and oiled after you're done using them. It's especially important to do this small task before putting away your tools for the season.

Another handy trick is to keep a 5-gallon bucket filled with coarse builder's sand in your garage or tool shed. Dip the metal blades of each tool into the sand and pull them up and down several times. This will remove any mud or clinging soil. Next, use a wire brush or steel wool to take off any rust or other particles of debris that remain. You also can pour some motor oil into the bucket of sand so that, when dipping them in the sand to clean them, you give them a coating of oil.

Despite these recommendations, if you still don't lubricate your tools regularly, at least do so at the end of the season, applying a light coat of oil to the blades. Also protect wooden-handled tools with linseed oil or a coat of varnish. And lubricate any moving parts. Then store tools in a dry place. By following these steps, your tools will be ready whenever you are, any time of the year.

By Greg Stephens

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How To Sharpen An Axe

Since so many folk showed a interest in th' axe an' Emailed me for advice, I thought I'd take this here time to show you whut I learned.

Fust, find a piece of log about 4' long and bury it about 1/3 way in the dirt. Then go and cut yourself a few stakes about 6-8" and as big as your thumb. Next, Lay your axe alongside the log on it's smoothest side so that the blade points straight up to heaven. Use the stakes to pin the axe securely (2 along the handle and one near the blade) by pushing them into the dirt.

With the axe now firmly secured, you can go to work. For best sharpening, invest in a good fine file and a two sided whetstone - the big ones are what I like, but a little one works well too!

Get yourself a piece of cardboard or thin wood about 2" square for a handguard and punch a hole straight in the middle and slip this over the end of the file where you hold onto it. If it's got a handle, remove the handle and put the cardboard/wood handguard on in front of the handle then put the handle back on. This'll keep you from slicing off your fingers.

Look at your blade - if it has bends or cracks in it, you may have to hammer them out before you proceed, but chances are your axe has gotten dull. There ain't nothin' worse than a dull axe - it plumb tuckers a feller out an' it's dangerous too. Them dull axes will bounce clean off of a log an' funny thing, they suddenly gets real sharp like when they hitcha in the legbone.

Start to filin' on that blade by using a smooth vertical motion, gently working the file as you go down along the length of the blade. Boy if that ain't confusin' I don't know what is. Take that file and file, and as you are filing downward, make the file move a little along the length of the blade. This will make a smooth stroke that covers the blade. Repeat this several times, then turn the axe over. You may need to go back and forth several times.

If you've got some paper, drag it over the edge of the blade and if it snags and cuts the paper, you are sharp enough. Be careful not to file too much or at too harsh of an angle or you will definitely hurt the edge. You should be able to look down and see a thin edge that looks like a sliver of silver hair down the middle of your blade.

Remove the axe from it's holder and take out your whetstone and put some oil or spittle on it - oil is better. Use your whetstone along the edge of the blade and move in small circular motions up and down each side of the blade. The blade will seem less sharp when you get done, but it will be smoother and less likely to crack. Don't be tempted to use it with the rough edge, it'll break your blade for sure.

For you folks who are out in the North, afore you go a choppin' wood or anythin', warm that axe blade up if it's freezing. That axe blade can get water in it and get brittle when it's frozen. You can put it under your arm pit (careful which way you point that sharp end though) or warm it near the fire. Never stick no axe blade or any other tool into the fire or it'll lose it's temper an' I don't mean it'll get mad. Temper is the strength of the blade and if you don't know how to blacksmith, it's best to not go sticking tools into the fire.

The best way to sharpen your axe is to not let it get dull. Don't go sticking any axe or knife into the dirt, don't cut paper (except to test the sharpness of the blade), and keep it in a sheath if possible. I saw a feller carrying his axe in the woods and he fell and cut the boy in front of him clean to the bone on his calf muscle.

Keep your blade from getting rusty by oiling it regular like. If'n that blade comes loose of the handle, take it all the way off and get another wedge or shim and put it in there. Don't use no nails or nothin' cuz they don't hold very good an' one day you'll be cuttin' and zippydoodah your axehead will go flyin' through the woods and hopefully it won't hit nobody in your party.

Don't use that axe to drive wedges with. I know, I know y'all are sayin' "But Daniel, one side of my axe is flat jes like a hammer". That's right it's fer drivin' wooden stakes, not fer hittin' another piece of steel. If you are a goin' t' drive wedges, git a hammer - otherwise y'all break that axe.

I got me a thing called a 'monster maul' that we use t' split up our wood an' it works something ferocious like. Course it's heavy an' all, but it beats the dickens out of havin' t' tap them wedges inta th' wood, smackin' em through and then goin' and pickin' em up. When we go t' wood splittin', it's me an' my two boys. One sets the logs on top of my stump an' the other picks up and stacks the pieces. Now that them younguns are bigger'n their daddy (an' I'm a purty big feller), they takes turns a swingin' the maul so's their daddy don't get wore out. (Actually I ain't gittin' wore out, I jes know them younguns needs t' feel important an' like theys helpin').

By "Daniel Boone"
