

Sharpening Tools for Landscaping and Gardening¹

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There is an old adage about knives: A sharp knife is a safe knife.

At first glance, this notion seems incorrect. Common sense suggests that it is easier to cut yourself with a sharp knife. However, when a knife is dull, cutting requires more force, and the extra force makes it easier to slip and cut yourself.

Sharpening a knife makes cutting tasks both easier and safer. Knives are not the only tool to which this principle applies. Many landscape and garden tools are used for cutting or chopping, and they also benefit from sharpening. Some obvious examples are axes and pruners, but tools like shovels and hoes also are used to cut and chop. Digging with a sharpened shovel often requires less effort and can reduce the amount of time a job takes.

This publication will discuss the required equipment and supplies to sharpen common landscape and garden tools, as well as the proper sharpening techniques.

Common Sharpening Equipment and Supplies

Some useful equipment for sharpening tools includes the following:

- Protective eyewear and gloves,
- Steel wool or wire brush,
- Files --
 - Flat mill file (8 - 10 inch)
 - Round or half-round file (8 - 10 inch),
- Bench vise, clamp or other bracing system,
- Grinding wheel/bench grinder,
- Scissor sharpeners,
- Sharpening stones,
- Sandpaper
- Oils

See Figure 1 for examples of sharpening equipment.

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Figure 1. Some useful equipment for sharpening tools.
Credits: G.C. Denny

Protective Eyewear and Gloves

Be sure to use the appropriate protective equipment when sharpening tools. Protective eyewear to prevent any small pieces of metal or debris from damaging your eyes is critical. Gloves to protect your hands from sharp edges and metal filings are also helpful. Ear protection may be useful when using bench grinders or other electric sharpeners.

Steel Wool or Wire Brushes

Steel wool or a wire brush is useful to clean any rust or debris that may be on the tool prior to sharpening. It is much easier to sharpen a clean tool, and cleaning a tool before sharpening helps extend the life of your files or other sharpening equipment. Steel wool is inexpensive and can be purchased at most grocery or hardware stores or at home-improvement centers.

Files

An 8 – 10 inch flat mill file with a bastard cut is the basic tool used to sharpen common landscape and garden tools. These files are relatively inexpensive (around \$10) and can be purchased at most hardware or home improvement stores. Mill files have teeth of different sizes. The bastard cut is an intermediate tooth size and is good for general-purpose use. A 10 inch file is easier to remove metal with, but an 8 inch file offers a little more control.

When purchasing a file it is also a good idea to invest in a handle for the file. Handles are inexpensive, can be used on all your files, and make using the tool much easier. A round or half-round file is useful for sharpening the flat side of hand pruners and loppers.

Bench Vise

A bench vise makes sharpening tools much easier by freeing your hands and firmly holding the tool you want to sharpen. A bench vise can be purchased for between \$25 and \$50 at most hardware stores or home-improvement centers. Clamps and other bracing systems can also be used to hold steady the tool you are sharpening. Clamps and other bracing systems come in an array of types, sizes and costs.

Grinding Wheel/Bench Grinder

A grinding wheel is useful for removing large amounts of metal from a tool, as is sometimes necessary when the edge of a tool is badly damaged or very dull. Extreme care should be taken when using a grinder because it is easy to remove too much metal and ruin a tool in so doing. Bench grinders are more useful on heavy tools, such as axes, machetes, shovels, spades and hoes. Smaller tools – such as hand pruners, shears and loppers with a fine edge – should not be sharpened on a grinder unless you are already skilled at sharpening tools.

Scissor Sharpeners

Specially made “scissor sharpeners” are especially useful for keeping a keen edge on tools like grass shears. These sharpeners are not as useful when the cutting edge is badly damaged or dulled. Manual scissor sharpeners can usually be purchased for less than \$10 at hardware stores and home-improvement centers. Electric sharpeners are also available. Remember that scissor sharpeners and knife sharpeners are not the same thing although they look similar. However, these sharpeners create a different bevel on the edge of the tool.

Sharpening Stones

Sharpening stones are useful for putting a very fine edge on a tool. Sharpening stones can be made of many different materials with different levels of abrasiveness. Whetstones and oil stones are usually coated with oil or water while being used to sharpen a tool. Diamond plates are also commonly used and employ finely ground diamond as an abrasive to create an edge. Most sharpening stones are only used to finish the edge on a tool and are not very useful for large or heavy tools, such as shovels and axes.

Sandpaper

Sandpaper is often used to remove burrs left by a file or grinder. The most useful sandpaper is 300-grit wet/dry sandpaper. It can be attached to a flat surface (like a workbench), using tape, nails, or staples. Wet/dry sandpaper is inexpensive and can be purchased at hardware stores and home-improvement centers.

Oil

Oils are used with whetstones and oil stones and can also be applied to the tool in a thin layer after the tool has been sharpened, so to prevent rust. Light-weight oils that are specially designed for this purpose can be purchased at hardware stores and home-improvement centers.

Sharpening Techniques

When sharpening tools, be patient and remember – the angle matters. Take your time and do the job right. The angle, or bevel, that you put on a tool's edge determines how sharp the tool is. However, the proper angle is also determined by the intended use of the tool. The proper bevel for a shovel is not the same as that for hand pruners. The smaller the angle, the sharper the edge, but an edge with a smaller angle is not as durable.

For most tools that are sharp when you buy them (pruners, axes, etc.), it is best to follow the factory bevel when you re-sharpen them. It is easy to ruin a pair of pruners by putting an incorrect angle on the edge. Tools that are dull or blunt when they are purchased (shovels, hoes, etc.) benefit greatly from sharpening. Selecting the proper angle for these tools

depends on how you intend to use the tool. Most shovels require about a 45° angle; any sharper and the edge will dull too quickly. The proper angle for hoes depends upon the intended use, but generally ranges between 20° and 45°. For heavy chopping and cultivation, 45° is best. A good general purpose edge for most hoes is 30° to 35° while fine weeding may require a bevel between 20° and 30°.

Sharpening Shovels and Hoes

1. Clean any rust or debris from the blade with steel wool or a wire brush. (Figure 2)



Figure 2. Use a wire brush to remove rust and debris.
Credits: G.C. Denny

2. Place tool in the bench vise or clamp. Make sure the tool is positioned so you can put the proper bevel on the cutting edge. The inside of the shovel or hoe should be facing up.

3. Find the appropriate angle for the bevel. Move your file across the entire edge in one, long stroke away from you. Move the file in only one direction and avoid short, jerky strokes. You should be able to see a line of clean steel as you work. Adjust the angle you are filing to keep even the line of clean steel on the edge. Keep doing this until you have a clean steel edge across the entire blade, with the desired bevel. (Figure 3)



Figure 3. Move the file in only one direction and avoid short, jerky strokes. Credits: G.C. Denny

4. Attach a piece of 300-grit wet/dry sandpaper to a flat surface, such as a workbench (duct tape works well for this). Rub the back side of the blade across the sand paper to remove any burrs that may have been formed by filing. Gently feel the back of the blade to see if all the burrs have been removed. Always move your hand perpendicular to the edge when checking for burrs, never parallel. (Figure 4)



Figure 4. Use 300-grit sandpaper to remove any burrs on the back side of the blade. Credits: G.C. Denny

5. Finally, apply a light coating of a good-quality oil to protect the blade from rusting. (Figure 5)



Figure 5. Wipe a thin layer of oil on the blade of the shovel to prevent rust. Credits: G.C. Denny

Sharpening Hand Pruners

1. Loosen the pivot bolt and separate the blades.
2. Clean any rust or debris from the blades with steel wool or a wire brush.
3. Place cutting blade in the bench vise or clamp. Make sure the blade is positioned so that you can put the proper bevel on the cutting edge.
4. Find the appropriate angle for the bevel. Remember, it is best to follow the factory bevel that was on the blade initially.
5. Starting at the point, move your sharpening stone or file across the entire edge in one long stroke away from you. Move the stone or file in only one direction and avoid short, jerky strokes. You should be able to see a line of clean steel as you work. Adjust the angle you are filing to keep even the line of clean steel on the edge. Keep doing this until you have a clean steel edge across the entire blade, with the desired bevel. (Figure 6)
6. Attach a piece of 300-grit wet/dry sandpaper to a flat surface, such as your workbench (duct tape works well for this). Rub the back side of the blade across the sandpaper to remove any burrs that may have been formed by filing. Gently feel the back of the blade to determine whether all the burrs have been removed. Always move your hand perpendicular to the edge when checking for burrs, never parallel. (Figure 7)

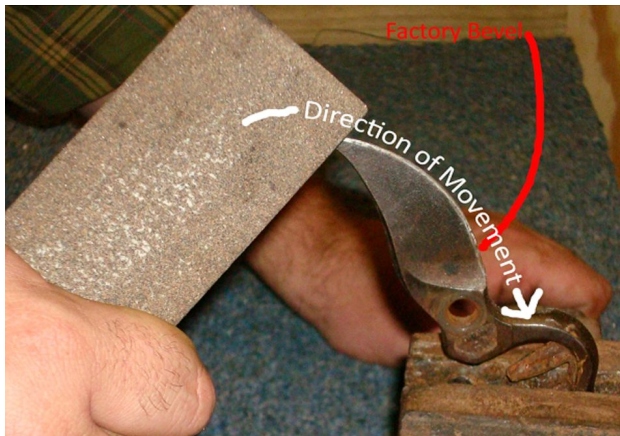


Figure 6. It is best to follow the factory bevel that was on the blade initially. Starting at the point, move your sharpening stone or file across the entire edge in one, long stroke away from you. Credits: G.C. Denny



Figure 7. Use 300-grit sandpaper to remove any burrs on the back side of the blade. Credits: G.C. Denny

7. Place the blunt blade in the bench vise. Make sure the blade is positioned so you can work on the inside of the curve.

8. Using a round or half-round smooth file, file the edge of the curve perfectly flat. It is critical that you file this edge at 90° to the inside of the blade. Again, move the file in only one direction and avoid short, jerky strokes. (Figure 8)

9. When you get the surface flat, sand both sides of the blunt blade on the 300-grit sandpaper to remove any burrs. (Figure 9)

10. Finally, apply a light coating of a good-quality oil to protect the blade from rusting and re-assemble the pruners.

A properly sharpened tool can make a job much easier. Sharp tools help save time and effort. If you are patient and have the right equipment, putting a sharp edge on your landscape and garden tools is not difficult. However, if you are not comfortable



Figure 8. Using a round or half-round smooth file, file the edge of the curve perfectly flat. It is critical that you file this edge at 90° to the inside of the blade. Again, move the file in only one direction and avoid short, jerky strokes. Credits: G.C. Denny



Figure 9. Use 300-grit sandpaper to remove any burrs on the back side of the blade. Credits: G.C. Denny

sharpening these tools yourself, professional sharpening services are available to put a keen edge on your tools.