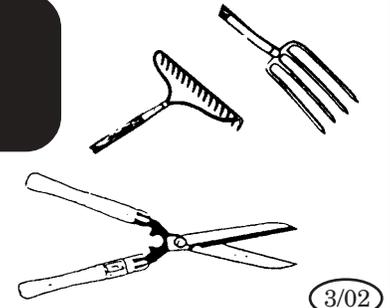


Caring for Your Tools

It is said that "a bad workman quarrels with his tools." Buying quality tools and providing TLC to them means making your gardening work quicker and easier as well as passing a legacy of your handiwork down to your children!



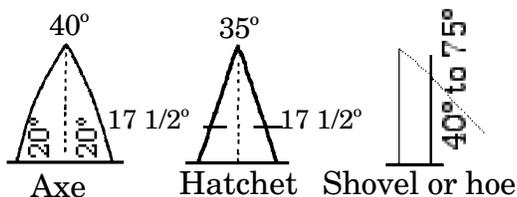
"The most important tool in the garden is you. When you're feeling rusty and dull or not too sharp, you should take care of yourself. The same is true of your garden tools: They'll be more productive if they're well cared for" [Jim Child, *Garden Gate*, Issue 30, 12/99]. Many tools can benefit from a good sharpening. Shovels, spades, trowels, hoes, pruning shears, loppers, and hedge clippers will all work better if sharpened regularly. Considering the cost of good gardening tools these days, it pays to take care of them properly. The best way to ensure that your tools will last a long time is to give them a thorough once-over before you put them away for the winter.

Safety First

- Always wear safety goggles to protect your eyes and face from flying bits of dirt and metal. You can never hear this warning too often and there should be *NO* exceptions.
- Use leather (or other heavy fabric) gloves to protect your hands when filing or sharpening metal tools.

Maintaining the angle

- Sharpening involves removing some of the metal from the blade to restore the cutting edge. The angle of that cutting edge is called the "bevel".



- Sharper is not always better when it comes to garden tools. It is important to try to maintain the same bevel (angle) as was present when the tool was new. If you make the edge too blunt, the blade will not cut well; if you make the blade angle too sharp, the edge of the blade will be weak and you will wear away most of the blade with just a few uses in the garden.

Use These to Help Maintain Your Tools

- **Goggles...** Absolutely necessary when cleaning and sharpening tools. A flexible plastic goggle that encloses your eyes provides the best protection.
- **Gloves...** Select gloves that are somewhat heavy yet flexible for best protection against cuts. A little TLC will make them last a long time.
- **File...** A mill file produces a smooth finish and is used for sharpening most tools.
- **Vise...** Used to secure the tool being sharpened.
- **WD-40...** This product lubricates moving parts, cleans grease, tar, gum, etc., protects surfaces against rust and corrosion, and penetrates to help free stuck parts. **Note:** this product is flammable.
- **Turpentine...** for removing plant sap from tools.
- **Oil...** Used to lubricate moving parts and to protect metal surfaces from rust.
- **Boiled Linseed Oil...** Purchased from local hardware and is used to preserve wood handles.
- **Wire Brush/Putty Knife...** Use to clean large amount of dirt from tools.
- **Sandpaper...** Use this to smooth rough handles. Use fine grit to sharpen high quality cutting surfaces.
- **Steel Wool...** for polishing fine metal surfaces.
- **Carborundum Stone...** Used to put sharp edges on cutting tools.

File: Most Commonly Used Tool for Sharpening

- Unless you're a pro, you shouldn't use a power grinder for sharpening gardening tools.
- Purchase a high quality, mill file from your local hardware. It should be about one inch wide and 10 inches long. Mill files have square edges and a slight taper to the body of the file.
- Files are not sold with a handle. While not necessary for use, consider purchasing one to provide more control of the file. The same handle can be reused on new files as they are replaced.
- A "mill" file is made with the teeth pointing in only one direction and is designed to cut only on the down or push stroke. Raise the file slightly as you bring it back. Trying to cut material on the backstroke will quickly ruin the file's teeth.
- Push the file away from your body and move it diagonally, so that it's cutting teeth are biting into the metal on the tool. Do not use oil because this will accumulate the metal filings clogging the file's serrations.
- Clean the file's teeth periodically from built up metal pieces by using a file "card" or a wire brush.
- Store the file in a dry place in its original container. Don't "throw" it in a drawer with other tools. This will dull the file's teeth and render the file unusable.

Vise (or other type of clamp)

- It is important to hold the tool being sharpened firmly in place. This is best done with a vise or a C-clamp.
- If the tool is allowed to move, you can get the wrong angle on the tool you are sharpening, damage the sharpening instrument itself, or worse yet, cause an injury to your body.



Prevent Rusting of Metal Surfaces

- Coat all clean, sharpened, metal blades and the heads of shovels, hoes, and rakes with a light oil. This can be done in a number of ways. Consider the following and decide which is best for you.
 - ❑ Spray with WD-40 or a silicone spray for a finishing touch. This prevents rust and keeps soil from sticking to the tool.
 - ❑ Rub the tool with an "oil sock." (Stuff a sock with sand or wrapped cloth. Tie a knot and

dip the sock in fresh engine oil or even vegetable oil. Squeeze out the excess oil, and store the sock in a zip-lock plastic bag.)

- ❑ An "oil dip" can be prepared by saturating a bucket of sand with engine or vegetable oil. Dip the tool surfaces in the bucket after using thus preventing rusting throughout the year. The pail can be stored out of the way and it will last "forever."

Don't Forget those Handles

- If a tool handle is loose, check to see that any screws or bolts connecting the working end of the tool to the handle are fastened securely. Tools like axes and heavy hammers have the wooden handle end showing through the tool. A metal wedge driven into the end of the wood handle is usually required to tighten this type of handle.
- If the handle is broken, replace it. Replacement handles are available in many hardware stores and garden centers. It generally requires the removal of some securing screw or bolt and the shaping of the replacement handle to fit the working end of the tool using a wood rasp, sanding machine or other wood removal device.
- Take the time to recondition your tools' handles. Start by cleaning the wooden handle with a stiff-bristled brush. Then smooth nicks and splinters with medium-grit sandpaper.
- Coat handles with boiled linseed oil to help prevent drying and cracking leading to splinters. Soak a rag in boiled linseed oil and slowly rub the handle, allowing the wood to absorb the oil. Let sit and repeat procedure several times.
- A spray rubber coating (also available in a dip) is good for covering parts of tool handles. This will improve your grip on the tool, prevent splinters, reduce wear and tear on the handle, and can help you to spot the tool easily in the garden.



Some Tool Storing Tips to Consider

- Store all tools in a dry place where you can find them in the spring.
- For smaller tools consider a bucket caddy. These cloth "aprons" wrap around a 5 gallon bucket, and have various numbers of pockets to store items. This keeps your hand tools in one place, and is easy to carry.

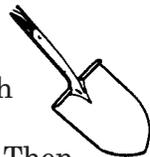


- Store the tools upright off the floor. A simple way to do so is to fit a board with shaker pegs, long nails, hooks or tool hangers and nail it to a wall in your garage or shed. Lay the tools on the board (a 1" X 4" will do nicely) as if they were already hanging, then position and fasten the pegs or nails appropriately. Finally nail the board to the wall and hang the tools on or between the hangers.
- Do a quick examination and cleaning of your tools as you put them away. A plastic kitchen spatula by the door works great to scrape off dirt and mud. Don't use a metal trowel for scraping — you could end up dulling both tools.

Get Started Right

- The first step is to clean the tool. Clean all surfaces to remove any dirt that can harbor moisture and cause the metal to rust.
- If it is dirty, wash the tool with soap and water to loosen dirt and crusted material. Scrape off stubborn chunks with a putty knife or stiff wire brush. If the tool is painted, do not use the brush or it will scratch the paint.
- If it is rusty, clean all rust off the tools to be sharpened. You can use the wire brush to remove most of the rust and then use steel wool to finish the job.

Round Pointed Shovel



- Clamp the shovel securely in a vise with the blade pointing downward so that it can be brushed with a pushing motion. Then use a wire brush, sandpaper and steel wool in that sequence. If you need more help, a penetrating type of oil will also help remove stubborn rust.
- Sharpen the edge of the blade. It is sharpened from the scoop side. Using both hands, hold the file securely and push away from your body with long, smooth strokes. Hold the file at the same angle as the original bevel. As you push down with the file, also push it to the side and across the blade to get a good cut. When the edge is smooth, even and shiny, check the bevel to see if it is satisfactory.
- To check the bevel, hold the file in line with the new edge. Don't worry if it's not exact, but try to get it close. Blunt bevels will hold up best on tools used for rough and tough digging. Tools used for lighter duty, like turning fluffy soil, can have sharper bevels.

- After the filing is complete, turn the shovel over and lay it on the vise. You'll feel a rough edge or curl of metal, called a burr, on the back of the blade. Using the file gently, file toward the handle until the burr is gone. A piece of fine sandpaper can also be used for this purpose.
- Wipe the entire tool blade with oil. When you're storing the tool for winter, leave a heavy coating of oil on the blade. If you're heading back to the garden soon, wipe the excess oil off to keep soil from sticking.
- Lightly sand the entire handle and rub it with boiled linseed oil and a rag to seal the wood. The wooden handles get rough and can leave splinters. Treating them just once a year keeps them smooth and splinter-free.

Square Pointed Shovel (flat)

- Use the same procedure as for the round pointed shovel.
- As this type of shovel wears, it leaves the sides sticking out and sharp. These sides can be removed with a power grinder or a hacksaw.

Hoe and Trowel

- Care for a garden hoe using the procedure similar to the shovel. File the outside edge of the hoe first, working away from the handle. Then take the burr off the inside surface as you did with the shovel.
- The trowel can be sharpened and cared for just as you did with the shovel.



Pitchfork

- Care for a fork using the procedure similar to the shovel, however the tines do not generally require sharpening.
- One method for straighten any bent tine of a pitchfork is as follows:
 - Drive a three-foot-long one-inch galvanized pipe into the ground in a convenient but out of the way place. Leave roughly one foot of the pipe above ground.
 - Stick the bent tine in the pipe and bend it back until it's straight.
 - For safety, cover the protruding pipe with a five-gallon bucket.





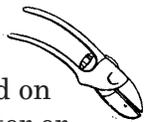
Hedge Shears



- Dirt and sap left on garden tools contribute to the spread of soil-borne diseases and weeds; they also attract and hold moisture, leading to the spread of rust. Remove any sap that may have collected on the metal surfaces with some soapy water or turpentine.
- If the blades are rusty, clean them with a piece of steel wool making sure that none of the blades are bent. If a blade *is* bent, loosen the pivot nut and separate the blades, put the bent blade in a vise and tweak it until it is straight.
- Once the blades are straight, clamp one blade in a vise with the blade side facing up. Examine the factory edge, hold the file with both hands and mimic the direction of the bevel. Move the file in one broad stroke, moving away, along the entire cutting area. Apply moderate pressure on the downward side of the file, going across the blade. Remember to lift the file on the return.
- Repeat this motion several times until the whole edge shows an even line of exposed, clean metal. This usually takes at least 10 strokes. Repeat the process on the other blade.
- Remove burrs from the blade by placing a sheet of 300-grit wet or dry sandpaper on a smooth flat piece of plywood. Lightly sand the backside of the blade using a circular motion. After several circles, check to see if the burrs are gone.
- Re-assemble the hedge clippers and lubricate.

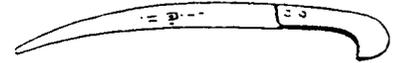
Pruning Shears, Lopping Shears and Scissors

- This tool is by far the fussiest garden tool to sharpen. The principle is the same as for hedge shears, but moving along the curved blade asks a great deal of your fine motor skills.
- Disassemble the unit.
- Remove any sap that may have collected on the metal surfaces with some soapy water or turpentine.
- When sharpening, try to maintain the original factory bevel or angle. Use a whetstone or carborundum stone because it produces a very sharp cutting edge. An alternative is to use a 320-grit wet or dry sandpaper, cut three to four strips per sheet and fastened to a wood back.
- With the beveled side of the blade against the stone, rub the sharp edge of the blade toward the stone in a curved motion, as if you were trying to shave off a thin slice from the stone.



- The other half of the pruning shears has a thick, blunt blade that the sharp curved blade cuts against. This blunt blade needs a crisp 90-degree edge.
- Reassemble the unit and oil pivot points with a light household oil or WD-40.

Pruning Saw



- Saws are generally best sent to a saw sharpening person when they are dull.
- With care and patience you can do your own sharpening using a small triangular file. Note that each tooth on the saw has an opposite bevel. Generally every other tooth is sharpened and then the saw is turned and the remaining teeth are sharpened.
- It is important to make the same number of strokes on each tooth so that the saw will cut straight and true.
- The problem is that each saw tooth needs to be "set" so that the blade will not bind during cutting and this requires a professional.

Hoses

- Drain water from garden hoses and sprinklers, and hang them to dry before coiling the hoses for storage.
- Now is a good time to replace any worn washers in the hose-end couplings and repair leaks with hose mending couplings.
- Coil the hose and store somewhere that does not receive direct sunlight.
- With multiple hoses, it might be good to note where each one came from, so it can be placed back in the right spot next season.

**For more information on maintaining and using garden tools or related gardening information, please call
Cornell Cooperative Extension office!**

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