

Tools of the Trade: From Essential to Expendable



By: Taylor E. Jones
Horticulture Agent

NC Cooperative Extension – Guilford County

But first, SAFETY



Gardening Tool Safety

- Prior to use, always inspect garden hand tools for defects or damage (e.g., splintered, loose, bent, or cracked tool handles, mushroomed tool heads, sprung tool joints, worn tool teeth).
- If a hand-garden tool fails your inspection, remove it from use.
- It is recommended that first time gardeners receive hand-tool training from an appropriately experienced instructor.
- Wear personal protective equipment (PPE) appropriate for the gardening task and weather conditions, including items such as a hat with brim, long-sleeved shirt, long pants, gloves, sunglasses, closed-toed shoes, and sunscreen.
- Use eye protection when the garden hand tool produces flying, crumbling, chipping, sparking, or splintering debris.

Gardening Tool Safety

- Consume an adequate amount of water for gardening weather conditions.
- When gardening in warm weather, take frequent breaks in the shade.
- Keep the cutting edges of garden hand tools sharp. When cutting, always cut away from the body.
- Always use the proper garden hand tool for the job.
- Follow all product label instructions, including those for PPE use, when using a hand applicator to apply pesticides or fertilizers.
- Rotate gardening tasks frequently to reduce the potential for repetitive motion injuries.
- Stand with your back straight when using long-handled garden tools such as hoes, rakes, and shovels.
- Protect your back when picking up heavy items by maintaining a straight back, bending your knees, firmly grasping the object, and slowly lifting with your legs.

Gardening Tool Safety

- Avoid using garden hand tools above your shoulder height.
- Use an insect repellent when biting or stinging insects are present in the garden.
- Do not horseplay with garden hand tools.
- Digging with your bare hands can result injuries such as cuts, punctures, or insect bites. Accordingly, dig with a hand trowel or other tool and gloves instead of using your bare hands.
- When finished, clean garden hand tools and store in their proper locations.

Eye Protection

a shield to protect the eyes from any type of foreign debris that may cause irritation or injury



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Sun Hat

Shields from the sun



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Gardening Shoes/Boots

Protects feet from mud
and sharp objects



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Garden gloves

Protects hands from
thorns and soil



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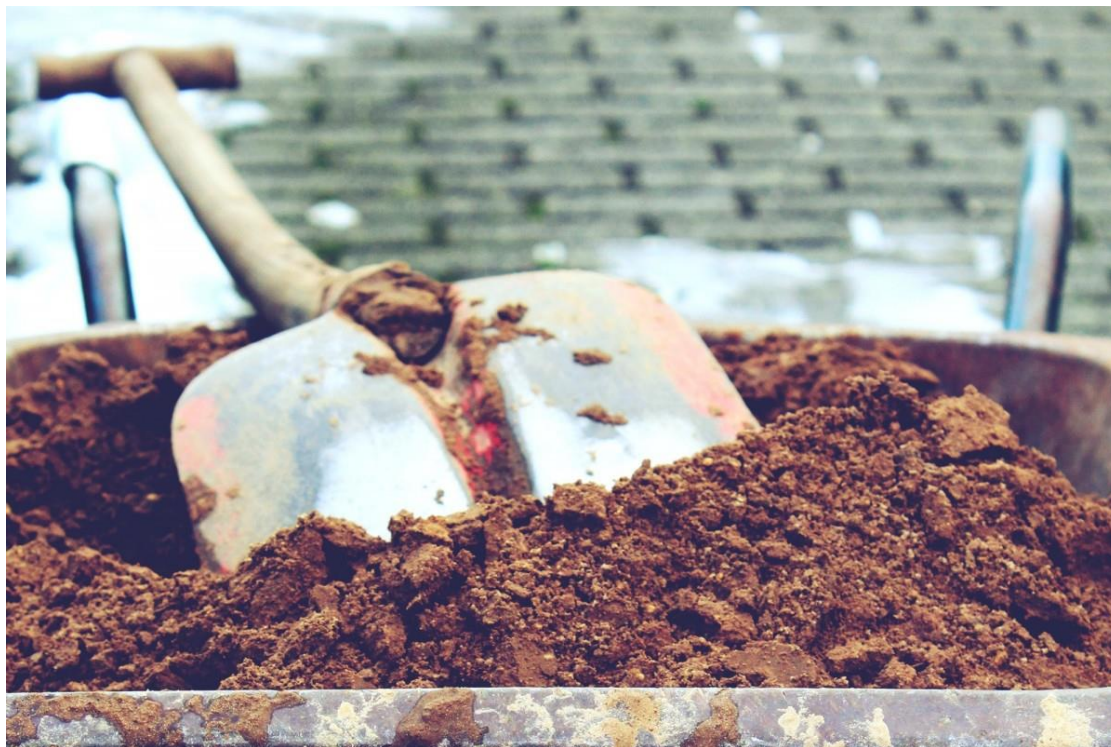
Knee Pads

Cushions knees during
kneeling garden chores



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Digging and Soil Preparation Tools



Spade

For digging and turning
soil



Shovel

Used for moving soil,
compost, or



Garden Fork

Ideal for breaking up soil
and turning compost



Mattock

Used for digging, prying, and chopping. Combines an axe and adze for heavy work.



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Garden hoe

Used to cultivate and
remove weeds



Scuffle hoe on top, Warren
hoe on bottom

Broadfork

a multi-purpose lawn
and gardening tool ideal
for turning, tilling, lifting,
and aerating soil



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Hand Trowel

Small handheld tool for digging and planting



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Post Hole Digger

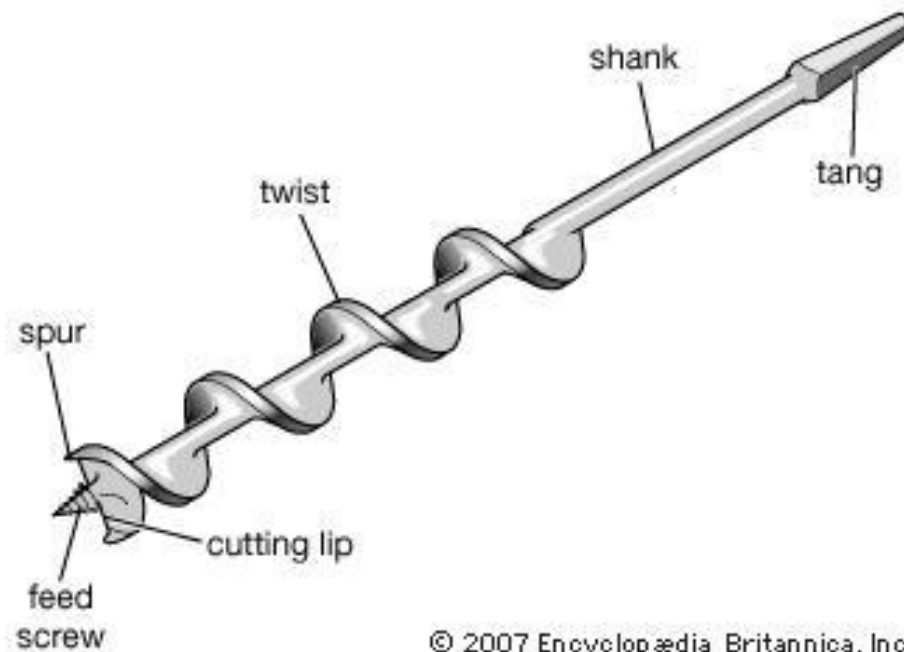
a tool consisting of two articulated [shovel](#)-like blades, forming an incomplete hollow cylinder about a foot long and a few inches wide, with two long handles that can put the blades in an "open" (parallel) position or a "closed" (convergent) position.



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Auger

An earth auger, earth drill, or post-hole auger is a drilling tool used for making holes in the ground



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Cutting and Pruning Tools



Pruners

For cutting small
branches and stems



Loppers

Larger than pruners,
used for thicker
branches



Pruning Saw

Designed for cutting
through thicker branches



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Hedge Shears

Trims hedges and
shrubs



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Garden Scissors

Handy for fine cutting
and deadheading



Pole Saw

a saw attached to a pole
or long handle that is
used for pruning tree
branches that are
beyond arm's reach



Machete

A large knife used for cutting brush and herbaceous material



Weeding Tools



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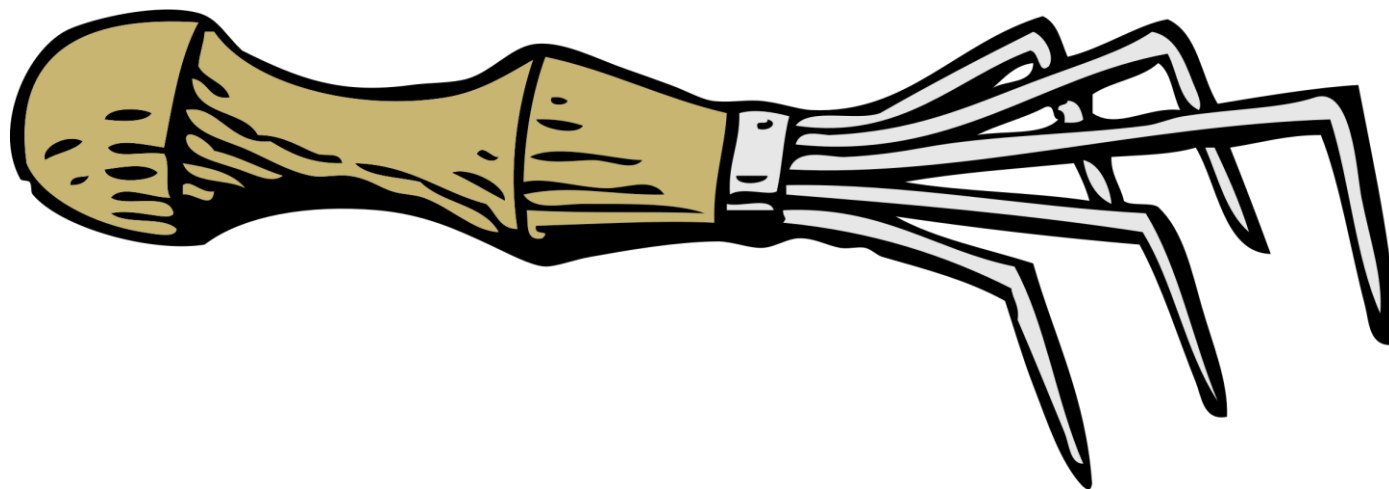
Hand Weeder

Removes weeds at the
root



Weeding Fork

Helps loosen soil around
weeds



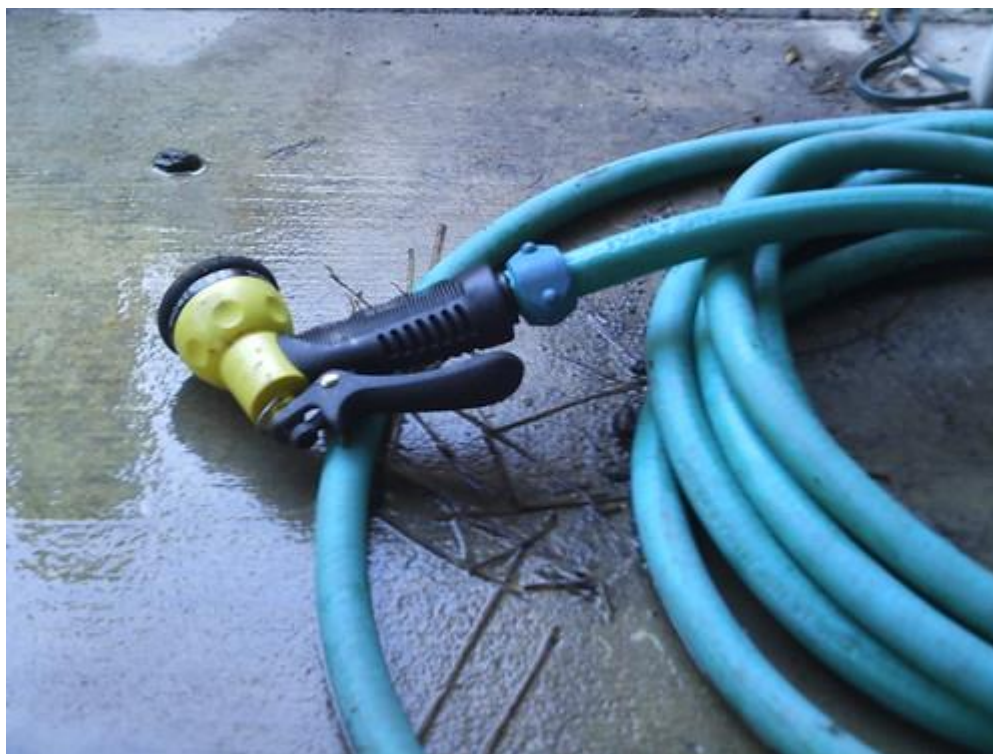
Weeding or Soil Knife

Useful for cutting weeds
in tight spaces



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Watering Tools



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Watering Can

Traditional method for
precise watering



Hose and Nozzle

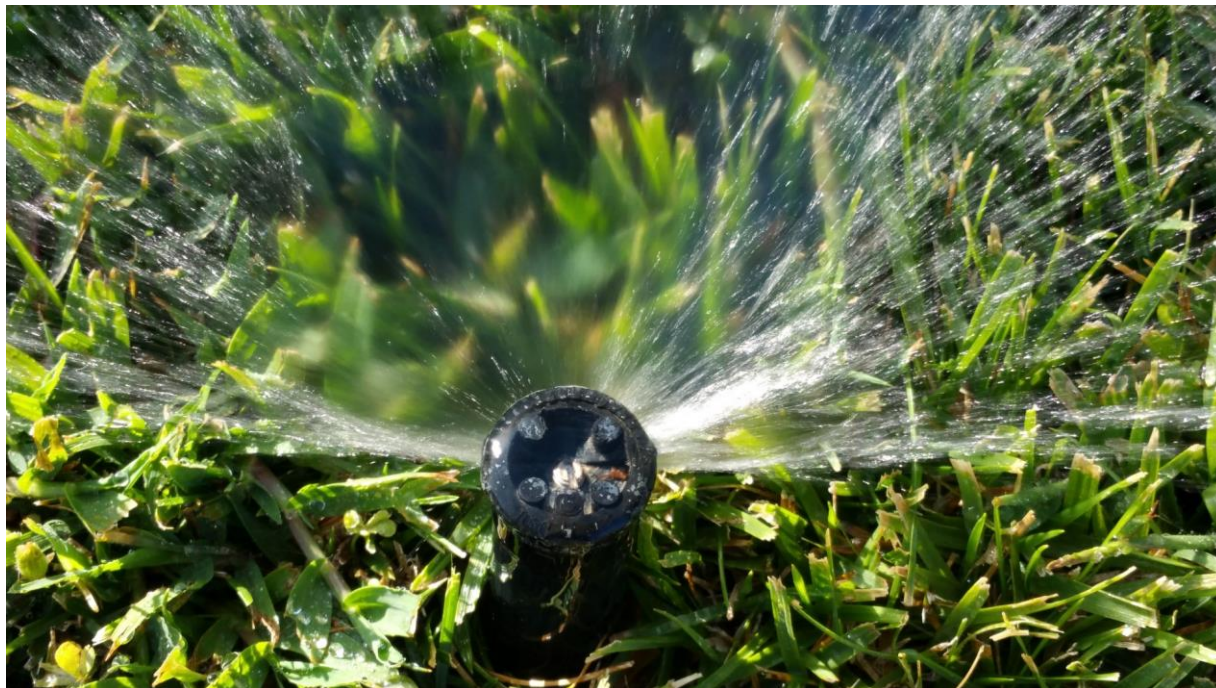
For watering larger
areas



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Sprinkler

Distributes water over a
wider area



Drip Irrigation

Drip irrigation is the slow, even application of low pressure water to soil and plants using plastic tubing placed directly at the plants root zone



Soaker Hose

Soaker hoses have thousands of tiny pores that drip water slowly and evenly at low pressure



Planting Tools



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Bulb planter

Digs holes for planting
bulbs



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Seed Spreader

Distributes seeds evenly



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Transplanting Spade

Ideal for moving small
plants



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Seedling Dibber

a pointed wooden stick
for making holes in the
ground so that seeds,
seedlings or small bulbs
can be planted



Planting Bar

A tool used for planting bare-root seedlings by hand.



Raking and Cleaning Tools



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Garden Rake

Levels soil and removes debris



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Leaf Rake

Collects leaves and
debris



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Garden Broom

Sweeps hard surfaces in
the garden



Lawn Sweeper

a lawn care machine that is moved over a lawn to clear it from debris.



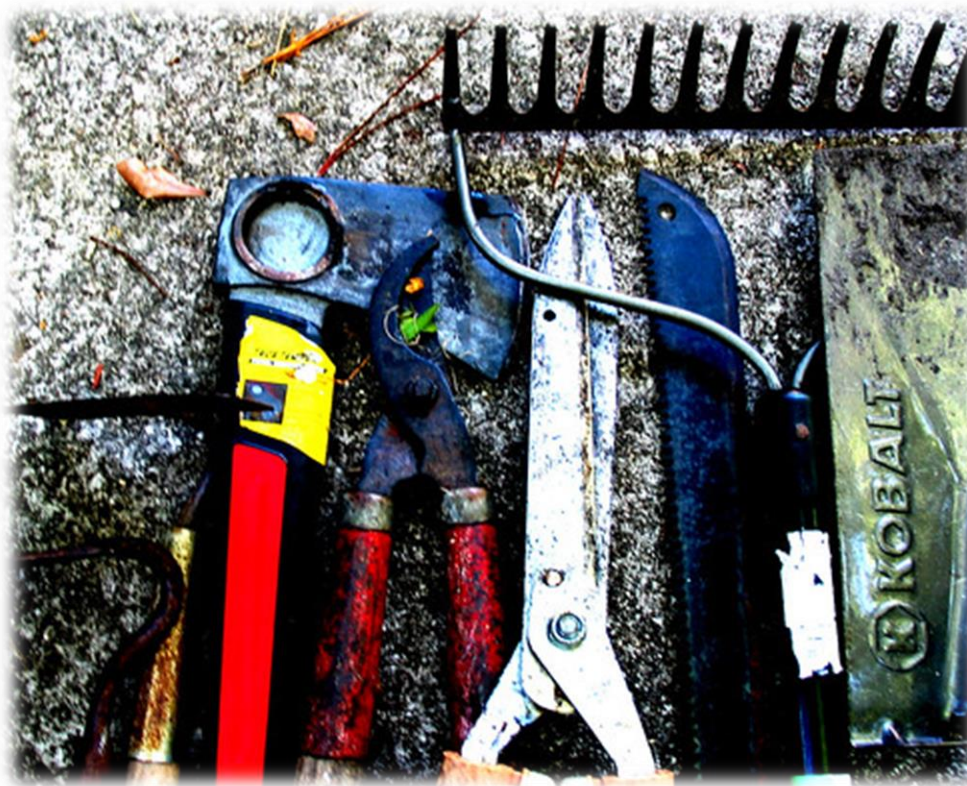
Pressure Washer

the use of high-pressure water spray to remove loose paint, mold, grime, dust, mud, and dirt



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Miscellaneous Tools



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Garden Cart

a cart for carrying small loads; has handles and one or more wheels.



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Garden Kneeler

Provides a comfortable
surface for kneeling



Soil pH Meter

Measures the acidity or alkalinity of the soil



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Compost Bin

a container that holds organic waste that ultimately turns into compost



Wheelbarrow

a small hand-propelled load-bearing vehicle, usually with just one wheel, designed to be pushed and guided by a single person using two handles at the rear



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Garden Twine

Twine can be made of cotton, hemp, or even plastic — it's stronger than string, but thinner than rope. It can be used to stake plants in the garden



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Lawn Edger

a manual garden tool
which is used around the
edges of a lawn to
create an immaculate
border next to other
garden features



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Lawn Aerator

a garden tool designed to create holes in the soil in order to help lawn grasses grow. In compacted lawns, aeration improves soil drainage and encourages worms, microfauna and microflora which require oxygen



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Power Tools



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Chainsaw

a mechanical power-driven cutting tool with teeth set on a chain which moves around the edge of a blade



Electric Pruner

Electric pruning shears are used for cutting and pruning of tree and shrub branches below 30mm



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Hedge Trimmer

an electric tool
resembling a chainsaw
used for cutting back
bushes, shrubs, and
hedges.



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Garden Tiller

designed to break up
hard, compact soil into
loose, broken-up dirt that
can then be used for
planting



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Five Minute Bio Break

Stand up, stretch, use the restroom, and be back in the auditorium in about 5 minutes.

Cleaning tools and containers

- Plant pathogens like bacteria, fungi and viruses cause diseases that can kill plants. They can be transferred to and infect plants through bits of soil and plant debris like roots stuck on a shovel, tree sap on a pruner blade, or soil left on a pot.
- Sometimes it's easy to see what you need to clean. But pathogens are microscopic and, while your tools may look perfectly clean, these microorganisms may still be on your blade or tomato cage.
- Prevent the spread of disease between plants by thoroughly cleaning and disinfecting your tools, equipment and garden implements.

When should I clean my tools?

- In the fall before you put them away for the winter.
- In the spring before you use them if you didn't clean them in the fall.
- After working with an infected plant and before moving onto the next plant.
- After you use your tools at another garden site and before you use them at home.

HOW to clean and disinfect garden tools?

Depends on product and tool you are working with...

Household disinfectants

- The advantages to using household disinfectants, such as Lysol, to clean are that they're easy to find and most aren't corrosive. The disadvantage is that little research has been done regarding their effectiveness against plant pathogens. Additionally, household disinfectants are relatively expensive when compared to other disinfectants that can be used on horticultural tools. How you use household disinfectants will vary depending on what product you are using. Generally you will want to apply a full strength spray or dip; always be sure to read the label first. Commercial household disinfectants are widely available at a variety of stores.

Chlorine bleach

- Chlorine bleach is inexpensive, effective, and easy to find. However, it is corrosive, can produce harmful fumes, and isn't as effective against viruses as some other products. To use chlorine bleach to disinfect horticultural tools, mix up a 10% bleach solution (one part bleach to nine parts water) and do a 30-minute soak. The solution has a short lifespan—effectiveness is cut in half after two hours—so fresh batches should be made for each round of cleaning. Rinse tools with clean water after soaking to prevent corrosion.

Alcohol

- The advantages of alcohol (ethanol or isopropyl) to sanitize your gardening tools is that it can be used as a wipe (no soaking necessary), you don't have to rinse the product off, and it's immediately effective. The disadvantage of alcohols? They're very flammable. To disinfect your tools with alcohol you can either wipe or dip them in a solution that is 70–100% alcohol. Ethanol and isopropyl alcohol are widely available at a variety of stores.

Industrial Products

- There are several different types of disinfectants use in commerical agriculture, typically available only through horticulture-supply vendors. There are *quaternary ammonium compounds*, commonly called "quats" or "q-salts", used to control fungal, bacterial, and viral plant pathogens. Products include Green-Shield® and KleenGrow™. There are also hydrogen dioxides, which are labeled as a disinfectant for use on greenhouse surfaces, equipment, tools, and for use on plants. Products included ZeroTol® 2.0 and Oxidate® 2.0.

Sharpening Garden Tools



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Sharpening Hand Pruners

1. If your pruners are easy to disassemble, start there. It is much easier to clean and sharpen a detached blade. Take pictures as you take apart your pruners to help you remember how to put them back together. Skip this step if your pruners do not come apart readily.
2. Next, remove dirt and grime with warm, soapy water and a scrubby sponge.
3. After wiping pruners dry, use coarse steel wool to work off any rust. If pruners are badly rusted apply WD-40 and let soak for 10 minutes. After soaking, remove oil with a clean cloth and use steel wool to get rid of remaining rust.
4. Use a diamond file to sharpen the blade. Draw the file along the cutting edge of the blade, applying medium pressure. Be sure to set the file at the same angle as the factory beveled edge of the blade. Only sharpen in one direction starting at the inside of the blade and working outward.
5. Once you're satisfied the pruners are sharp, run a file with fine grit over the backside of the blade to remove any burrs.
6. Reassemble your pruners, referring to the pictures you took earlier.
7. Try cutting a piece of paper with the sharpened blade. If it makes a clean cut, the blade is adequately sharp.
8. Finish by oiling your pruners to lubricate the moving parts and prevent the steel from rusting. Wipe off excess oil with a clean rag.
9. Store your pruners in a clean and dry location.

Sharpening Larger Garden Tools

<https://youtu.be/9pEved9S9Mc>

Now let's practice!

Grab a tool on the front tables, and we will head to the demonstration garden!

OPEN HOUSE

February 15th, 2024
4:00-6:00pm

N.C. Cooperative Extension Guilford County Center

JOIN US FOR:

- Digital Literacy workshop on politics & the media
- 4-H online registration
- Local Public & Nonprofit Resource Tables
- Extension Staff meet & greet
- Food Truck! - Empanada Grill



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receive food
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