

Conditioning Flowers, Foliage and Branches

Conditioning is counter-intuitive ---- you'd think that cutting your flowers or foliage or branches at the last minute would help them last the longest. In fact, they will last longer if cut the day before and allowed to absorb as much water as possible for several hours or overnight. Also, the cleanliness of tools, water and stems is next to godliness because we want to slow the growth of stem-rotting bacteria. So, how do we keep our cut flowers, leaves, and branches from wilting at one end and rotting at the other? Here are three levels of detail about conditioning for you --- even the basic level will make a huge difference to your cut specimens or stems for flower arrangements.

The basics

Water plant well a few hours before you cut the stem. Cutting in the early morning or late afternoon is best. Use a clean, sharp knife to cut stem at a slant, and put immediately in a clean, sanitized plastic bucket of very warm water (100 to 110 degrees) that is about 1/3 the length of the stem deep.

Back inside the house, it might be helpful (although awkward to do) to recut the stem underwater to make sure there is no air bubble trapped inside. Remove any foliage or bark that will be underwater. At this point, especially if the water is no longer clean, you may transfer the stem to clean containers of very warm deep water mixed with a floral preservative which helps to slow bacteria growth and gives the stem some food.

Then place the container and stem in a cool dark place for 3 to 12 hours. Cooling allows the stem to take up extra water. Never store stem in a refrigerator with fresh fruits or vegetables.

Beyond the Basics: Conditioning Different Types of Stems

Regular Soft and Semi-soft Stems Cut at a sharp angle, possibly scrape the lower 2" of the stem, remove foliage that will be underwater, and put into deep, warm, conditioned water in a clean bucket in a cool place.

Woody Stems Cut at a sharp angle and split the stem ends about ½". Remove all the lower foliage and bark that will be underwater. Do not hammer or crush the stem end. Put the stem in a clean bucket about ¼ filled with warm conditioned water in a cool place.

Foliage Find a way to gently hold it down in a bath of water. Grey or woolly foliage is the exception because water spoils it, so put only the stem in water. Tropical foliage may dislike floral preservative.

Hollow Stems Cut at a sharp angle. Turn the stem upside-down and fill with tepid water. Plug the cut end with cotton wool before turning rightsideup and placing in deep, warm, conditioned water in a cool place. This eliminates the trapped air bubble.

Milky Stems Cut stem at a sharp angle. Hold the cut end in a flame for 10 seconds to seal in the sap. Then put into warm, conditioned water in a cool place. Or, a new approach is to give the cut stem several changes of clean, unconditioned water for 15 to 20 minutes each time to encourage all the milky sap to run out. Then put in conditioned water as usual.

Hot Water Treatment Some stems benefit from having the bottom 2" of the cut stem scraped and put into 2" of nearly boiling water in a container for 5 - 25 minutes, re-cutting the stem under water, then having cool conditioned water poured into the container. This eliminates the trapped air bubble.

Way Beyond the Basics: Conditioning for Individual Varieties

Cut and stand in plain deep water. No floral preservative.

Aconitum (monkshood) Scrape.

Alocasia (elephant ears)

Brunnera

Campanula

Crocasmia Fragile flowers. Sensitive to ethylene and heat. Scrape.

Cyperus (papyrus) Re-cut stems by at least 2-4". Scrape.

Tropaeolum (nasturtium)

Cut and stand in deep conditioned water.

Achillea (yarrow)

Alchemilla (lady's mantle)

Amaranthus (love-lies-bleeding, amaranth)

Angelica

Anigozanthos (kangaroo paws) Re-cut 2" and keep at room temperature

Antirrhinum (snapdragon) Room temperature. Dark room.

Artemisia Wilts after cutting but revives after 4 hours in water

Aster

Cleome (spiderflower)

Chrysanthemum Likes humidity and good air circulation.

Cosmos Does not store well but OK for 3 days.

Echinacea (purple coneflower)

Echinops (globe thistle) Refrigeration at 39 degrees intensifies color.

Eryngium (sea holly) Scrape. Refrigeration at 39 degrees intensifies color.

Eupatorium (Joe Pye weed) Re-cut stem by at least 2 - 4".

Gaillardia (blanket flower) Scrape. Sensitive to bleach.

Gomphrena (globe amaranth) Split stem.

Helenium (Helen's flower, sneezeweed) Warm water.

Heuchera (coralbell) Preservative with low sugar. Fragile flowers.
Leucanthemum (shasta daisy) Petals bruise easily. Preservative without an anti-ethylene agent. Does not store well but 1-2 days OK.
Liatris (blazing star) Scrape. Good air circulation. Likes changes of water. May benefit from the hot water treatment.
Lilium (lily) Stem snap easily. High humidity. Lily floral preservative if possible.
Lysimachia (gooseneck loosestrife) Complete preservative essential. High humidity.
Moluccella (bells-of-Ireland) Will bend toward light, so a dark room is good.
Monarda (bee balm) Scrape. Does not store well.
Nicotiana (flowering tobacco)
Nigella (love-in-a-mist) Does not store well.
Phlox Does not store well.
Solenostemon (coleus) Then submerge whole cutting in cold water for several hours.
Solidago (goldenrod) Put immediately in conditioned water. Stems drink up a lot of water, so check water levels. Condition for 4+ hours.
Tagetes (marigold) Scrape.
Thalictrum (meadow rue) Preservative with an anti-ethylene agent. Does not store well but 2 – 3 days OK.
Verbena bonariensis Shake gently upside-down after conditioning.
Veronica (speedwell) Does not keep well, but OK for 2-3 days.
Veronicastrum (Culver's root)

Cut, scrape, then give hot water treatment.

Asclepias (butterfly weed and milkweed)
Astilbe Split stem.
Celosia Re-cutting stem under water helps.
Dahlia Use sharp knife rather than clippers.
Euphorbia Or flame treatment.
Geranium
Gerbera Likes high humidity. Good hygiene essential.
Leonotis (lion's ear)
Papaver (poppy) Or flame treatment immediately after cutting. Condition 8+ hours.
Salvia Overnight in warm deep water.
Zinnia Water plant extra well before cutting. Remove ALL leaves except those close to flower. Flower head and stem collapse easily because stem is hollow just below the head. Keep in the dark for 3-5 hours prior to use. May prefer no plant food.

Flame Treatment

Euphorbia Or hot water treatment. Or the changes of water treatment (see "Milky Stems" above.) Does not like low humidity, ethylene gas, or air-conditioning.
Papaver (poppy) Or hot water treatment immediately after cutting. Condition 8+ hours.

Special Treatment

Allium (ornamental onion) Cut stem under water. Add one teaspoon bleach to one quart of water. Some say cool, some say warm water.
Brassica (kale, flowering cabbage) Water with bactericide.

Calceolaria (pocketbook flower) Delicate flowers, keep water off flowers and leaves. Doesn't like the dark.

Calendula 1-2 hours at room temp in conditioned water. Keep in cool area.

Canna Dip stem in boiling water, then submerge leaf in cold water for several hours.

Clematis Completely submerging flower may help. Cut stem to include part of the brown woody stem, split the cut end of the stem, condition for several hours or overnight, then recut stem to the length you want. Do a trial run for this one!

Codiaeum (croton) Bactericide.

Cordyline Bactericide. Wipe leaves clean.

Coreopsis Cut when flower is fully open but its center is still tight. Preserve with bactericide but WITHOUT an anti-ethylene agent. Likes humidity and room temperature. Does not store well. Overnight in deep cold water. Some say add one tablespoon salt to each quart of water.

Croton see *Codiaeum*

Delphinium Cut when spike is 2/3 open. Cut, scrape, then stand in cold deep water. If stem is hollow, turn upside down and fill with water. Preservative with a sugar, bactericide, and anti-ethylene. Keep stem upright or it will start to bend. Does not keep well because it rots easily.

Eustoma (lisianthus) Keep flowers upright in a floral preservative. Protect from high humidity. Lisianthus produces higher levels of ethylene than most flowers, so keep other flowers away from them.

Gloriosa (gloriosa lily) Preservative with a sugar. Branched stem keeps better than a single flower. High humidity. The pollen stains.

Hosta Some sources say to submerge the entire leaf, then condition in conditioned water. Others say to keep the leaf from touching water. High humidity helps.

Hydrangea Young blooms don't condition well. Add about an inch of boiling water to a clean container, then put the stem end in the water for a minute. Take it out of the hot water, then re-cut the stem end and put it into water right up to the bloom or immerse the entire cut (bloom and stem) overnight. If this is not possible, at least try holding the bloom upside down in warm water for 20 minutes.

Petunia Cut when fully open. Re-cut stem under cold water and condition in cold water for at least one hour.

Phormium (New Zealand flax) Leaves do not need to be cut or put in preservative. Can be stored dry and cold. Good ventilation.

Rosa (rose) Remove leaves and thorns that will be under water, but not the thorns that will be above water. Stem should be cut at a sharp angle, and the stem end split for about 1/2". Do not scrape the stem. Place the stem in a bucket filled with deep, conditioned, warm water.

For more information:

"Garden to Vase" by Linda Beutler

Try Googling on your plant's name + "conditioning"