



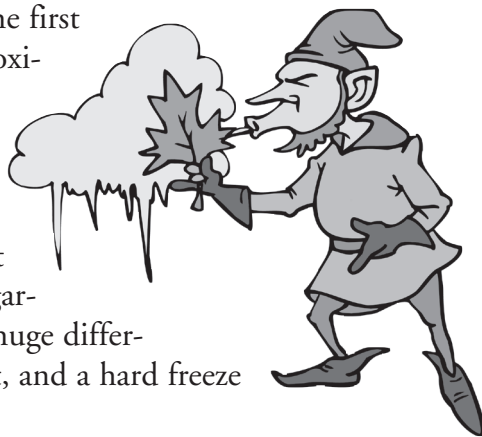
Jerry Baker
America's Master Gardener®

Natural Disasters

As the old saying goes, everyone talks about the weather, but nobody does anything about it. But gardeners do! We watch the weather, come up with dozens of special tricks to help our plants survive the challenges that stressful weather brings, and when real disasters develop, we get creative and make lemonade out of nature's lemons. That's what this Chapter is all about — turning bad luck into good luck in your yard and garden.

HIDE-AND-SEEK WITH FROST

Two of the biggest turning points in any growing season are the coming of the first and last frost. You can get the approximate dates of these events from your Cooperative Extension Service, or rely on your favorite TV weatherman (good luck!). Either way, you will know only part of the story, because as far as your garden plants are concerned, there's a huge difference between light frost, heavy frost, and a hard freeze (sometimes called a hard frost).



How to Entertain Jack Frost

Different kinds of frost require different kinds of action. Here's a run-down on what you can expect of Jack to offer up and how your plants want you to respond.

Light frost occurs when temperatures hover right at the freezing mark. Because cold air sinks, plants in low spots will get a heavier dose of frost than those growing on higher ground. Plants that have tropical ancestry — tomatoes, peppers, basil, and zinnia, for example — host bacteria on their leaves that actually promote frost damage. Hardier plants have little trouble with light frost, and may even benefit from the light chilling that frost brings.



HELP 'EM OUT

Just before you transplant your flower or vegetable seedlings, do what Grandma Putt did: Water them with a solution of 2 ounces of salt or baking soda per gallon of water. This will temporarily stop growth and increase their strength so they can stand right up and say “boo” to the changing conditions they'll face outdoors.

Bedders on the Move

Keep transplants in a wheelbarrow or wagon so you can easily move them in and out of your garage during the changeable weather of spring and fall. This is an easy way to “harden off” greenhouse-grown bedding plants to get them ready to face strong sun, chilling winds, and other stresses they'll face in the outdoor world.



What to do: Keep a supply of old sheets, blankets, and even newspaper on hand to cover plants overnight through the first fall frost, and also use them in spring if a late frost threatens early plantings. You can also use buckets, cans, flowerpots, or baskets to cover plants that might be damaged by light frosts. If more than one frosty night is likely, leave the covers in place until the mild weather returns.

Heavy frost is likely when temperatures drop into the high 20s and the air is moist enough to promote heavy dew. Most tender plants will be seriously damaged by heavy frost if they are not given good protection.

What to do: Double up on blankets or other covers to nurse tender plants through heavy frost. The afternoon before heavy frost comes, water plants thoroughly so they will be well supplied with moisture. Move plants in containers to a protected place, such as your garage or a cold frame or tunnel, if you have one. Wait several hours after the frost has gone to touch or move plants that may have been partially frozen by heavy frost.

Jerry Baker Says . . .

“If a late freeze threatens the flowers on your spring-blooming shrubs and trees, spray them lightly with water, so that the buds will be protected by a thin layer of ice. You may still lose some blossoms, but later ones should emerge in all of their splendor.”



Recycling Roundup



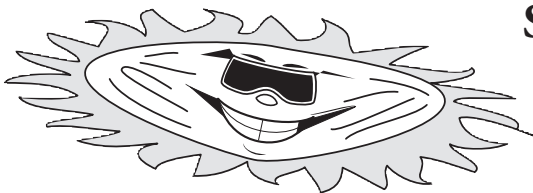
Old lampshades make great frost protectors. Just remove the fabric, set the wire frame over a plant, and drape a piece of old sheet or a plastic garbage bag over it. *Voilà!*

Hard freezes result when temperatures are at or below 26°F for more than 6 hours. Plant tissues actually freeze, and unless they are cold-hardy species, they may not recover.

Leaves of tender plants blacken and drop following a hard freeze, while hardy plants usually perk up after they thaw.

What to do: Give plants in cold frames and tunnels extra protection by covering the enclosures with heavy blankets or straw. Pull up and compost plants that are seriously damaged. Once hard freezes become frequent, mulch over the soil to keep it from freezing and thawing over and over again (see Chapter 3 for the complete lowdown on mulches).

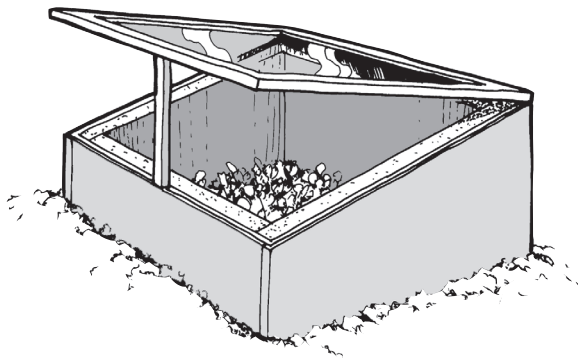




Season-Stretching Structures

You can add several weeks to your growing season by setting up special places where you can expose plants to strong sunlight while insulating them from low temperatures and frigid winds.

Cold frames can be as plain as an enclosure made from 4 bales of hay with clear plastic stretched over the top, or as sophisticated as the ones used by European gardeners — brick-lined raised beds topped with windowpanes that open and shut on hinges. Any box-type structure with a clear or translucent lid will do. The only essentials are that you can close the lid when it's cold and windy, and open it in warm weather to keep the plants inside from cooking.



Recycling Roundup



Here's another device that says "Phooey!" to frost — and chances are there's at least one in your refrigerator: a plastic milk jug. Just cut off the bottom, set it over a tender plant, and sink the bottle a couple of inches into the ground, so it won't blow away in the breeze.

Tunnels work just like cold frames, with the advantage of being portable and quick to assemble. My favorite setup consists of a black plastic garbage bag spread over the ground, with an arch of concrete-reinforcing wire over it. I cover the wire arch with clear plastic, slide flats of seedlings or container-grown plants inside, and secure the edges of the plastic with bricks. In less than 15 minutes, I have a season-stretching structure that the plants inside think is an unheated greenhouse.

TAME THE WIND

Once spring gets under way, temperatures may be fine for your plants, but the wind can be just too much. A little wind is good for plants; it encourages stems to grow tough and strong, and moving air keeps leaves dry and free from disease. But too much wind leaves plants battered and bruised, so taming things down is definitely the kind thing to do.



Give 'em Shelter

When a cold, harsh wind whips in, or the weather forecast predicts one, you need to rush to the aid of young plants. Here's how.

- ✓ **Seedlings and new bedding plants.** Cover them with bottomless plastic milk jugs or upside-down flowerpots. Sink the jugs into the soil a couple of inches, so they won't blow away.

If the pots are plastic, put a brick or heavy stone on top of each one.

- ✓ **Newly planted roses or other shrubs.** Surround each plant, or group of plants, with wooden stakes, then staple on burlap to make a screen.

Recycling Roundup



If you don't have burlap on hand when the wind kicks up, don't worry: Just reach for some old towels, over-the-hill flannel sheets, or sturdy fabric remnants. Stapled to wood stakes, they'll make dandy wind fences for tender shrubs.

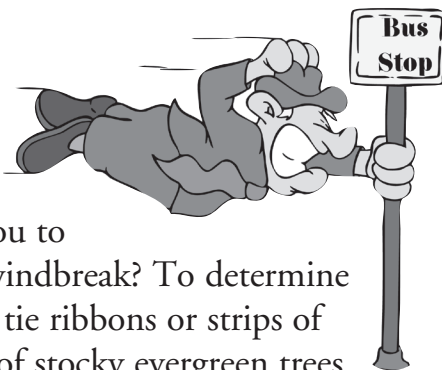
Shingle Shields

Is your garden hit by strong winds that tend to come from one direction in the spring? Make a practice of installing wind shields each time you set out a seedling. Wood roofing shingles are ideal, or you can use foot-long sections of lumber or

12- by 14-inch pieces of corrugated fiberglass. Set the shields in the soil 4 inches deep alongside your seedlings. You can leave your wind shields in place all season, or pull them out when your plants get tough enough to stand on their own.

The Case for Windbreaks

A site that's way too windy is tough on plants and the people who grow them. Persistent wind often keeps plants constantly thirsty, and makes it harder for you to enjoy your landscape. Why not plant a windbreak? To determine the angle from which heavy winds blow, tie ribbons or strips of cloth to wood stakes. Then, plant a row of stocky evergreen trees or shrubs to block the gusts.



Jerry's TOP TEN

Plants for Windbreaks

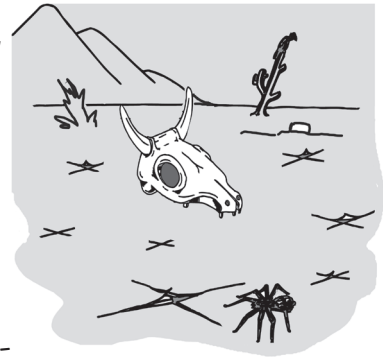
When you're planning a living windbreak, keep the size of your yard in mind. Go with shrubs or dwarf trees if your yard is small. Large properties can handle taller, fuller trees. Set the plants close enough so they'll just touch when they're fully mature. For extra protection, plant two alternating, overlapping rows.

- **Arborvitae** (*Thuja occidentalis*); 6 to 25 feet, Zones 3 to 7
- **Canada hemlock** (*Tsuga canadensis*); 40 to 70 feet, Zones 4 to 8
- **Foster holly** (*Ilex* × *attenuata* cv. Foster); 25 to 40 feet, Zones 6 to 9
- **Frazier's photinia** (*Photinia* × *frazeri*); to 15 feet, Zones 6 to 9
- **Leyland cypress** (*Cupressocyparis leylandii*); to 60 feet, Zones 6 to 8
- **Ligustrum** (*Ligustrum japonicum*); 12 to 18 feet, Zones 7 to 10
- **Norway spruce** (*Picea abies*); 40 to 60 feet, Zones 2 to 7
- **Red cedar** (*Juniperus virginiana*); to 40 feet, Zones 2 to 9
- **Swiss stone pine** (*Pinus cembra*); to 35 feet, Zones 4 to 8
- **Wax myrtle** (*Myrica cerifera*); 10 to 20 feet, Zones 7 to 9

WHEN THE RAINS DON'T COME

Late summer and early fall are often dry seasons, but drought can strike at any time of year. All plants need water, and if they get less than a half inch of rain weekly, they're probably stressed.

Providing water is the logical solution, but sometimes this is neither practical nor legal. During severe droughts, many communities impose watering restrictions, which means you must find other ways to keep your plants happy until the rains return.



Drought 911

When Mother Nature's tears of joy dry up, don't throw in the towel. With just a little extra TLC, you can see your yard and garden safely through the emergency. Just follow this checklist.

- ✓ **Double up on mulches.** The less moisture that evaporates away, the better off your plants will be.
- ✓ **Treat shrubs with an anti-transpirant.** It'll form a polymer coating around plants that reduces moisture loss through the leaves by up to 50 percent.
- ✓ **Watch plants closely for signs of spider mites.** These minuscule pests tend to flourish magnificently under drought conditions!
- ✓ **Keep vegetables picked and deadhead flowers often.** The less fruit plants hold, the less water they'll need to stay alive.
- ✓ **Install shade covers over vegetables and flowers.** An old sheet or a piece of lattice attached to 4 wood stakes will do the trick.



GO NATIVE

When you're shopping for plants, look for old-timers that are native to your territory. As Grandma Putt knew, they're better equipped to deal with nature's whims than either newfangled hybrids or plants that hail from other parts of the country.

OF FLOOD AND MUD

Usually, gardeners pray for rain, but every once in a while, it rains so much that we pray for it to stop. That's because once the soil becomes saturated, most of the air gets pushed out of it, and plant roots can't get the oxygen they need to survive. Fortunately, though, most plants can endure waterlogged conditions for a short time without serious damage.



SAVE THOSE WORMS!

When soil becomes very wet, earthworms move to the surface to avoid drowning. There they become easy prey for robins and other worm-eaters. Grandma Putt knew the important work worms do in adding organic matter to the soil and opening up drainage holes, and there was no way she was going to let a single one of her helpers perish. So after a rain, she'd go out and scoop up all the worms she could find and give 'em a safe haven in her compost pile.



Feet Off!

The most important thing to do when rains drown your yard is to be patient. Avoid walking around out there as much as you can, because your footsteps will squeeze out what little air is left in the soil. And never *ever* attempt to cultivate very wet soil. It will turn into a gloppy mess that will dry into hard, root-killing chunks.

If you need to gather herbs, vegetables, or flowers when the ground is muddy, lay old boards over the ground and use them as a temporary walkway. Besides keeping your shoes clean, the board-walk will distribute your weight and limit the amount of soil compaction caused by your footsteps.

After the Deluge

A long period of steady rain can be especially hard on the grass in your yard. But don't let the showers dampen your spirits — or drown your lawn! Maybe you can't shut off Ma Nature's faucet, but you can restore your lawn to health once the heavy rains stop. Just follow these timely tips.



- Try to stay off the grass until all traces of standing water disappear. Otherwise, your footsteps could leave the “wrong impression” or tear up the turf and make a mud bath.
- Strap on your aerating lawn sandals or golf shoes, and walk around the area. This will help water percolate into the soil.
- In the worst cases, dig a series of small, deep holes in out-of-the-way parts of your yard. They'll give the excess water a run-off route.
- Then apply gypsum at a rate of 50 pounds per 2,500 square feet of yard. This will loosen the soil, encouraging better drainage — almost like an army of little rototillers going to work in the soil.
- One week later, apply a natural organic lawn food at the recommended rate.
- In the fall, feed your lawn with my Fall Lawn Food Mix. Then overspray this mix with my Thatch Buster Tonic or All-Season Green-Up Tonic. That should help settle your lawn for its long winter's nap.

PROBLEM and SOLUTION

The Big Washout

Problem: It seems that every year, just after I've seeded my beds, the spring rains come and wash the seeds away. Do you have a solution? G.B., MI

Solution: I sure have! Snip some old mini-blinds into 6-inch pieces. Then slip them into the soil between your rows of seeds to make little edgings, so the rain won't wash the seeds from one part of the bed to another.

PREVENTING THE RAVAGES OF WINTER

Most plants need a winter rest, but winter is still a mean season. Count yourself lucky if the ground gets blanketed with at least 6 inches of snow. Winds may howl as air temperatures dip well below zero, but soil temperatures beneath snow usually hover at a comfortable 20 to 25°F.



In cold winters without snow, it helps to erect burlap fences around shrubs to protect them from drying winter winds. And even with snow, exposed plant parts are easy prey for hungry rabbits and mice. Check shrubs and trees regularly, and protect them with thorny branch clippings if critters start chomping on your plants.

As winter approaches, give your trees, shrubs, and plants a final wash-down with my Fall Clean-Up Tonic. It'll keep all your green friends healthier, so they can fend off nasty weather problems.

Before winter hits, apply a thick coat of a good anti-transpirant. This handy product protects plants from drying winds. In fact, it reduces moisture loss through the leaves by up to 50 percent.

PROBLEM and SOLUTION

Save That Grass

Problem: In my part of the country, winter is just one snow and ice storm after another. My town is Johnny-on-the-spot with its salt truck, but come spring, my grass is a mess where the lawn meets the road. How can I keep it looking good? M.L., IL

Solution: Before the first snow arrives, you need to liberally sprinkle gypsum on all grassy areas that border streets, sidewalks, and driveways — anyplace that will be treated with salt or snow-melting chemicals. Then apply my Winter Walkway Protection Tonic. It'll keep your lawn in great shape all winter long!

Timely Tonics



Fall Clean-Up Tonic

1 cup of baby shampoo
1 cup of antiseptic mouthwash
1 cup of chamomile tea

Mix these ingredients in a bucket, and then add 2 cups of it to your 20 gallon hose-end sprayer, filling the balance of the sprayer jar with warm water. Overspray your turf, trees, shrubs, beds, and so on when the temperature is above 50°F.

Winter Walkway Protection Tonic

1 cup of dishwashing liquid
½ cup of ammonia
½ cup of beer

Mix all of these ingredients in your 20 gallon hose-end sprayer, and then apply it liberally over the gypsum.



Mulch Magic

Give trees a thick mulch in early winter, especially young ones that have been in the ground less than 3 years. Keep the mulch about 2 inches away from the main trunk to discourage mice. This security blanket will prevent drought stress that often comes in early spring, when air temperatures are warm but the ground remains frozen and plants' roots have trouble taking up moisture. Beneath a cozy layer of mulch, though, the soil remains warm enough so that water can move through it easily — and right into your trees' roots.

Ice Isn't Nice

Snow may be a blessing to your garden in winter, but ice can be a nightmare. It's so heavy that it often breaks off branches, and any attempts you make to lighten the load by knocking off the ice can only make matters worse. But you can help small, ice-encrusted shrubs by throwing lightweight covers over them so that when sun shines through the ice, it doesn't burn the plant tissues inside. This is a perfect job for sheets that are too old for bedtime duty.



Give Heaving the Old Heave-Ho

Water expands as it freezes and contracts as it thaws. So when soil freezes and thaws over and over again, it often heaves up, breaking plant roots in the process. To keep perennials and shrubs from suffering this kind of damage, apply a loose mulch over the soil *after* the soil freezes in early winter. And when you're done with your Christmas tree, cut off the branches and lay them onto the bed as well. The idea is to keep the soil frozen, reducing the risk of damage to plant roots.

Think Ahead

To save time and hassle next spring, it pays to give your annual flower and vegetable beds a little pre-winter care. Here's the bedding-down routine I follow:

Step 1 Clear out all plants and toss them onto the compost pile.

Step 2 Loosen the subsoil with a garden fork. By doing this chore in the fall instead of waiting until spring, I give the earthworms time to repair the damage it does to their tunnels.

Step 3 Dig my Bedtime Snack into the soil.

Recycling Roundup



These days, lots of folks buy bales of straw to decorate their yards for Halloween, and then put the bales out with the trash. It's a great time to collect them, for free! Put that weathered straw to good use as mulch around your plants or as a protective covering on your walkways.



Step 4 Spread a thick layer of leaves over the soil and top it off with straw. I've found that this combo keeps the worms warm and busy all winter long, enriching the soil with their castings. Come spring, my planting beds are well fed and all set to grow.

Step 5 Overspray the mulch with a good healthy dose of my Sleepytime Tonic.

All-Season Clean-Up Tonic

- 1 cup of baby shampoo
- 1 cup of antiseptic mouthwash

Mix the ingredients in a 20 gallon hose-end sprayer, and give everything in your yard a good shower every 2 weeks or so during the growing season.

Bedtime Snack

Fall is a fine time to break new ground, because the soil has all winter to digest slow-acting amendments. This rich mixture can work miracles in heavy clay.

- 25 lbs. of gypsum
- 10 lbs. of natural organic garden food (either 4-12-4 or 5-10-5)
- 5 lbs. of bonemeal

Mix all of these ingredients together, then apply them to every 100 square feet of soil with your handheld broadcast spreader. Work them into the soil and cover with a thick blanket of leaves, straw, or other organic mulch.

Fall Lawn Food Mix

- 1 50 lb. or 2,500 sq. ft. bag of lawn food
- 3 lbs. of Epsom salts
- 1 cup of dry laundry soap

Mix all of these ingredients together, and apply at half of the recommended rate with your handheld broadcast spreader or drop spreader.

Sleepytime Tonic

When Old Man Winter is just around the corner, you should tuck your beds in with a thick blanket of mulch. This mixture feeds the mulch that slowly feeds your garden.

- 1 can of beer
- 1 can of regular (not diet) cola
- 1 cup of baby shampoo
- ½ cup of ammonia
- ¼ cup of instant tea granules

Mix all of these ingredients in a bucket, pour them into your 20 gallon hose-end sprayer, and saturate the mulch in flower beds, around shrubs, and beneath trees.

Thatch Buster Tonic

- 1 cup of beer or regular (not diet) cola
- ½ cup of dishwashing liquid
- ¼ cup of ammonia

Mix all of these ingredients in your 20 gallon hose-end sprayer. Fill the balance of the jar with water, and spray the entire turf area. Repeat once a month during the summer, when grass is actively growing.