

FREE GUIDE · FROST PROTECTION

Your Frost Cover Is Leaving Your Plants Cold

How to cover pots, beds, frames and trees so they make it through a hard freeze.



Michael, Thrive and Grow Gardens
Helping Tucson homeowners grow fruit since 2014

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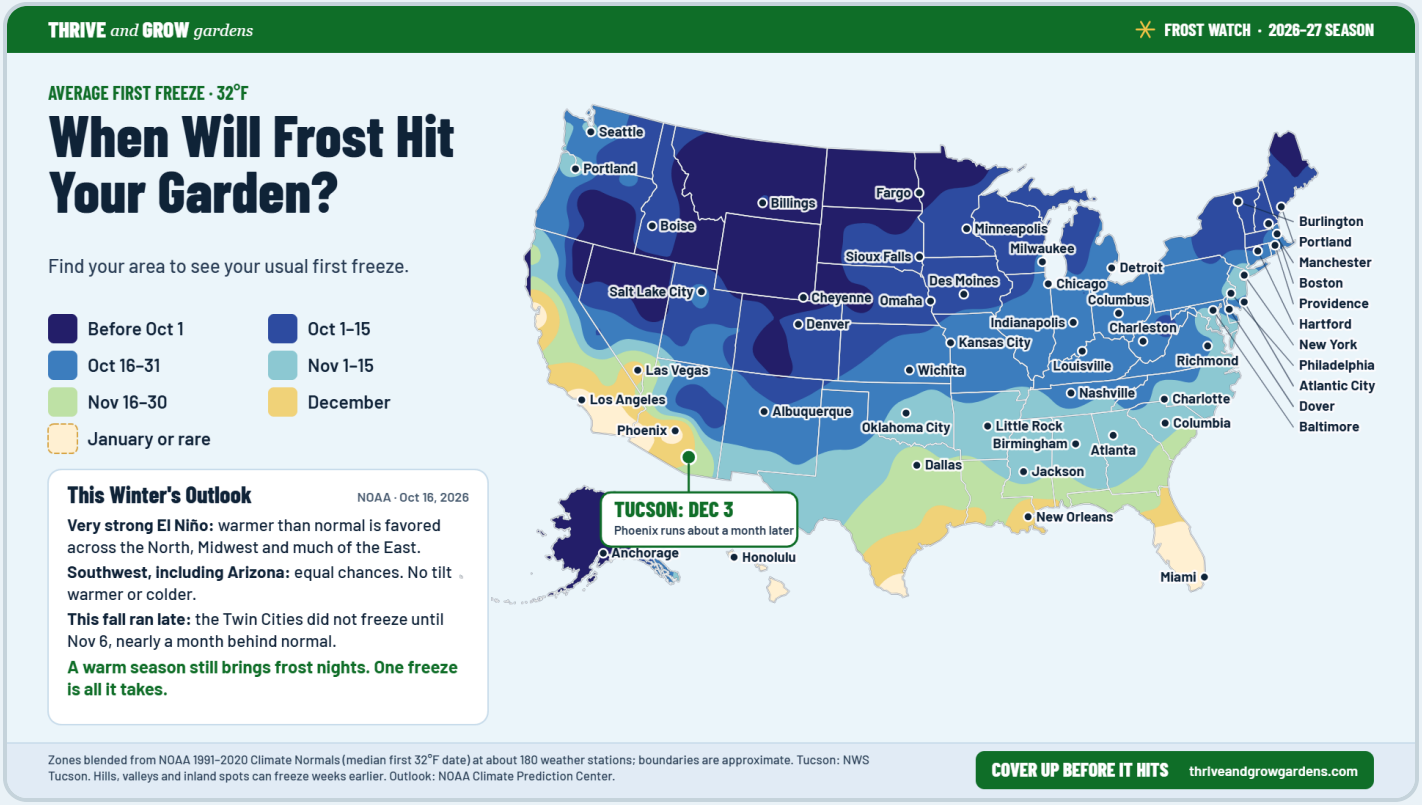
KNOW YOUR DATE

When will frost hit your garden?

Find your area on the map. The color shows when the first freeze usually arrives.



Dec 3

Tucson's average first freeze.

Weeks early

Low spots, valleys and open yards freeze first.

32°F

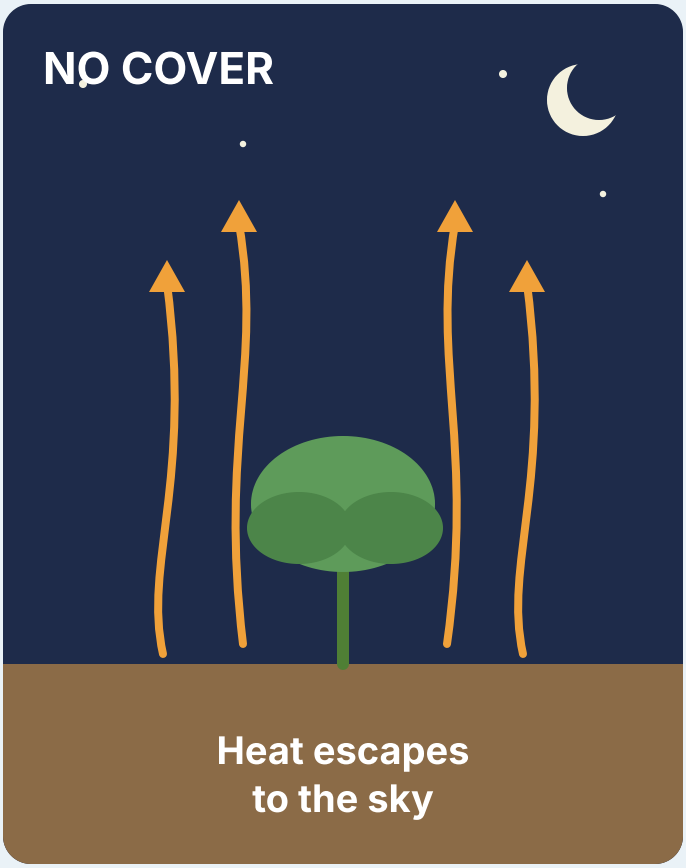
Forecast to hit it? Cover up before sunset.

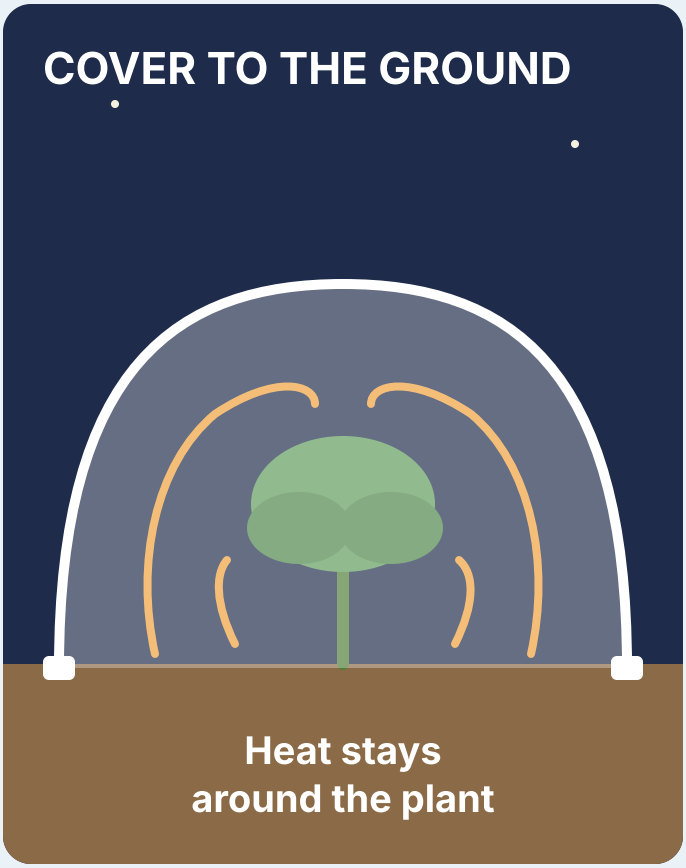
Map dates: NOAA 1991–2020 climate normals, median first 32°F date. Tucson: National Weather Service. These are typical dates, not a forecast: 2026 ran late.

THE BASICS

Frost cloth doesn't make heat. It holds it in.

All day, the sun warms your soil. On a clear, still night, that warmth rises back out of the ground. The cover's job is to catch it.





1. Reach the ground
The soil is the heat source.

2. Thick enough
Heavier cloth holds more heat.

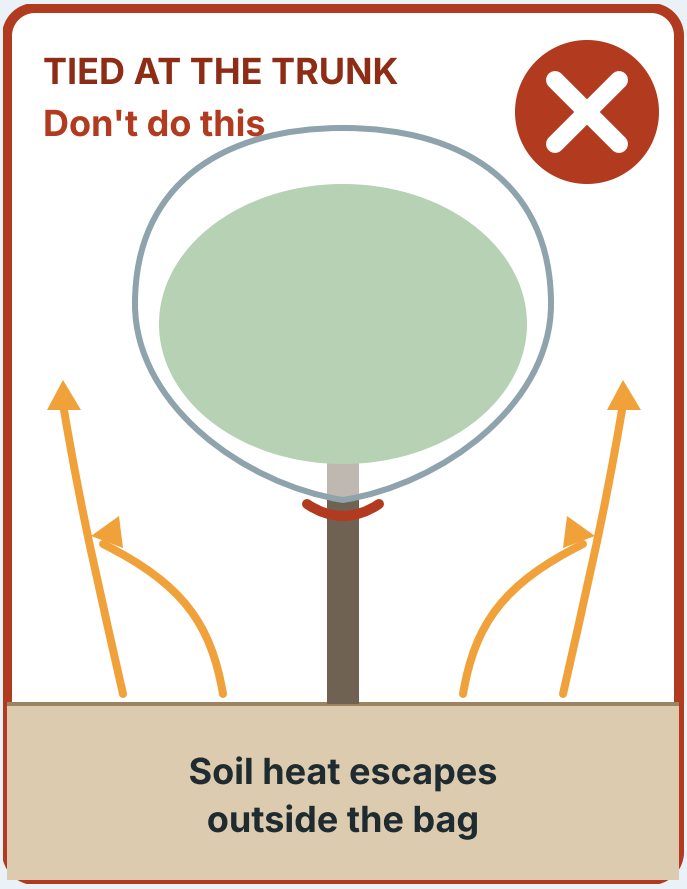
3. Dry and tight
No gaps, no wet fabric.

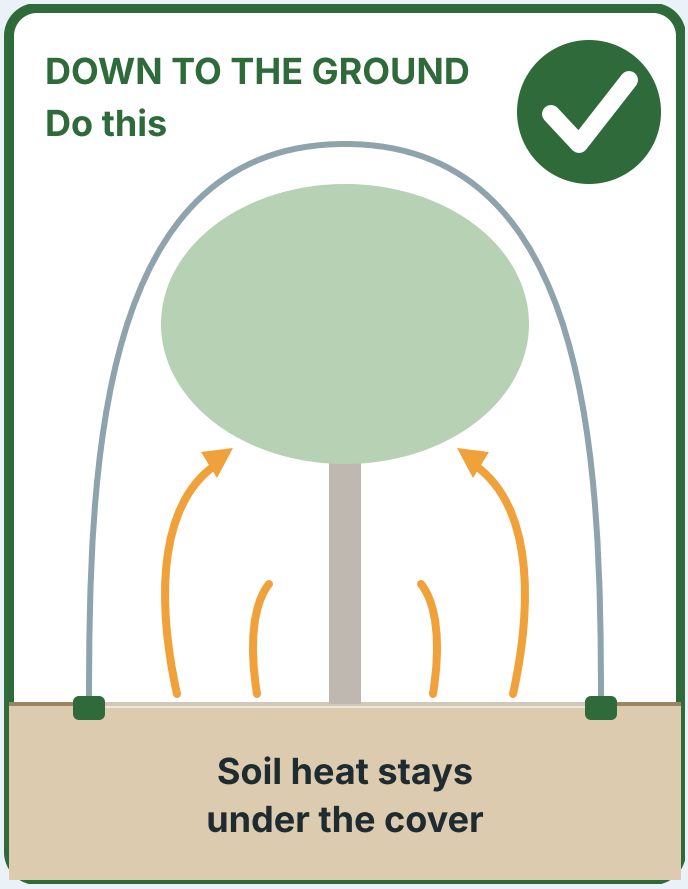
Tip: water the soil the day before a freeze. Moist soil holds more heat to give back at night.

THE #1 MISTAKE

That drawstring bag cuts your plant off from the heat

Online stores sell hundreds of frost bags that cinch at the trunk. Tied there, the warm air from the soil goes right past your plant.





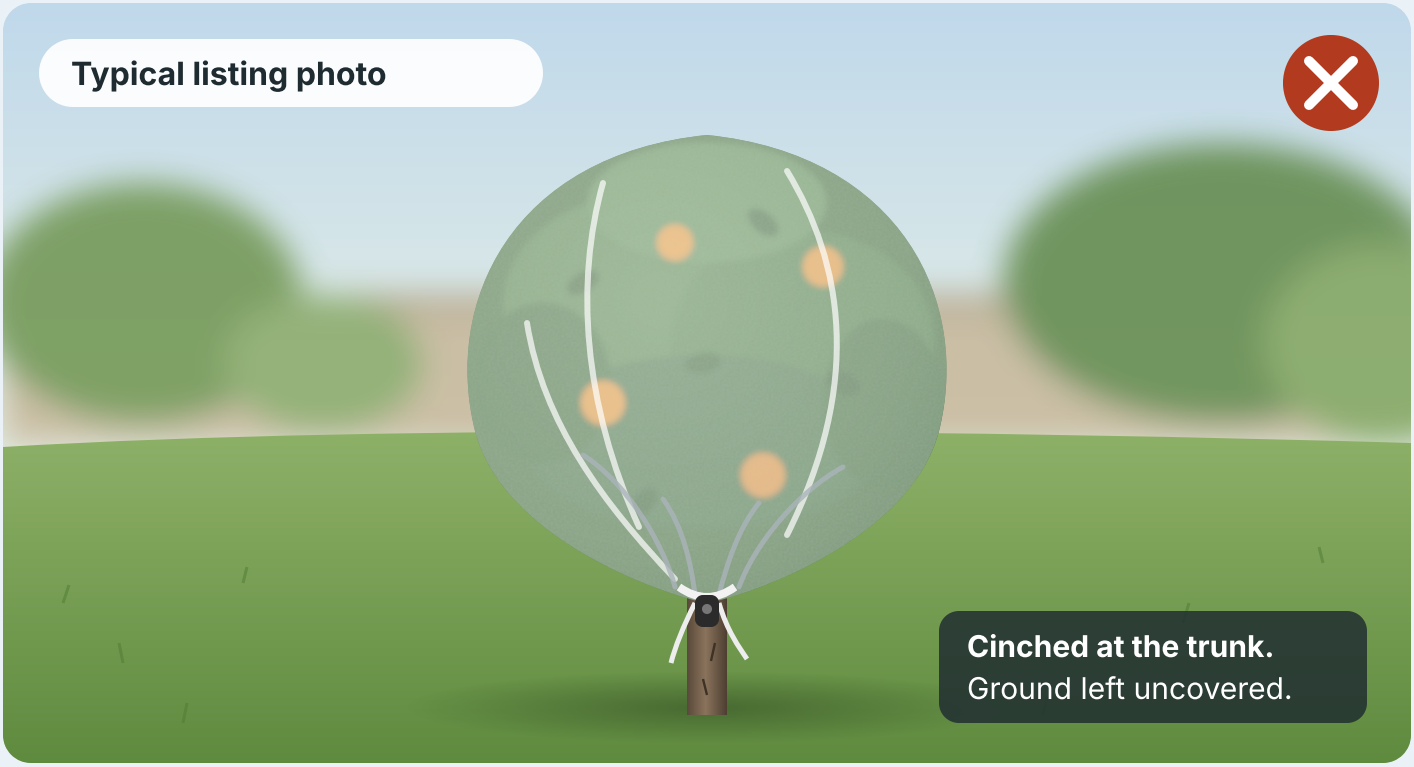
> *"Do not gather the covering around the tree trunk as this defeats the purpose."*
>
> University of Arizona Cooperative Extension, Frost Protection

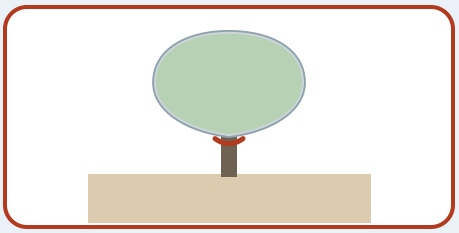
The fix: drop the cover all the way to the soil and seal it there. Trees: at the edge of the canopy. Pots: over the whole pot.

LOOK FAMILIAR?

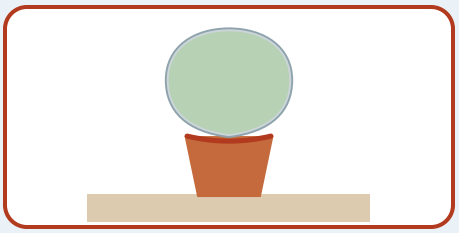
This is how most frost bags are sold

Search "frost cover" online and you'll see this photo again and again. It looks neat. It leaves the ground heat outside.

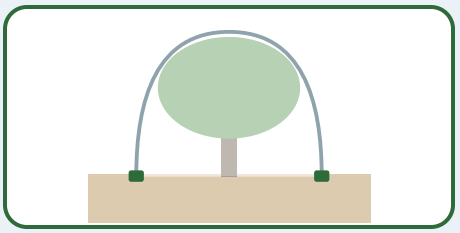




Tree bags tied at the trunk



Pot bags tied at the rim, roots exposed



Thrive way: to the ground

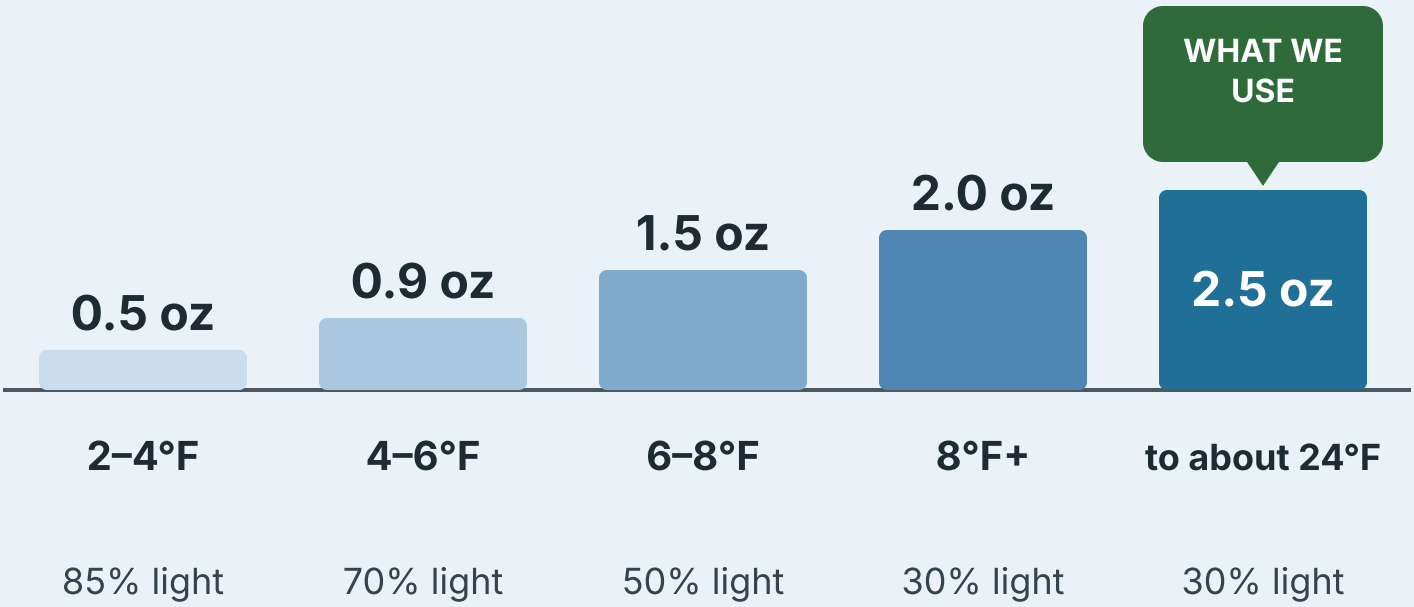
Before you buy, check the photo

- ✓ Does the cover reach the **ground**, past the edge of the canopy?
- ✓ Is the weight listed? Look for **2.5 oz per square yard** or heavier.
- × A drawstring at the trunk or pot rim means the ground heat stays outside.

BUYING FROST CLOTH

Heavier cloth, warmer plants

Frost cloth is sold by weight, in ounces per square yard. More weight holds more heat and lets less light through.



Frost protection

Most of Tucson's coldest nights fall between 25°F and 30°F. Heavy cloth covers that.

Light

Heavy cloth is for cold nights and cold snaps. Open it up on long sunny stretches.

Breathability

Spun fabric lets air and water through, so plants don't sweat or mold.

Tear resistance

Thin cloth rips on branches and stakes. Heavy cloth comes back year after year.

Ratings: Johnny's Selected Seeds row cover chart; DeWitt Ultimate 2.5 oz dealer specs. Degrees are how much warmer it stays under the cover on a still night.

WHAT NOT TO USE

Bed sheets, plastic and thin store covers

If you've thrown a sheet over a lemon tree at midnight, you're not alone. Here's how they stack up.

	Bed sheet	Plastic	Thin store cloth	Thrive 2.5 oz
Frost protection	Low, gone once wet	Leaves freeze where it touches	2–4°F	**Down to about 24°F**
Breathes	Poorly once damp	No	Yes	**Yes**
Leave on in the day?	No, molds and smothers	No, can pass 130°F inside	Yes	**Through a cold snap**
Lasts for seasons?	Not made for it	Cracks in the sun	Often tears the first year	**Yes, sewn to last**

Sheets soak up dew. Wet fabric cools as it dries, so it can leave the plant colder than no cover at all.

Plastic traps moisture and cooks plants in the sun. The University of Arizona says to use cloth, not plastic.

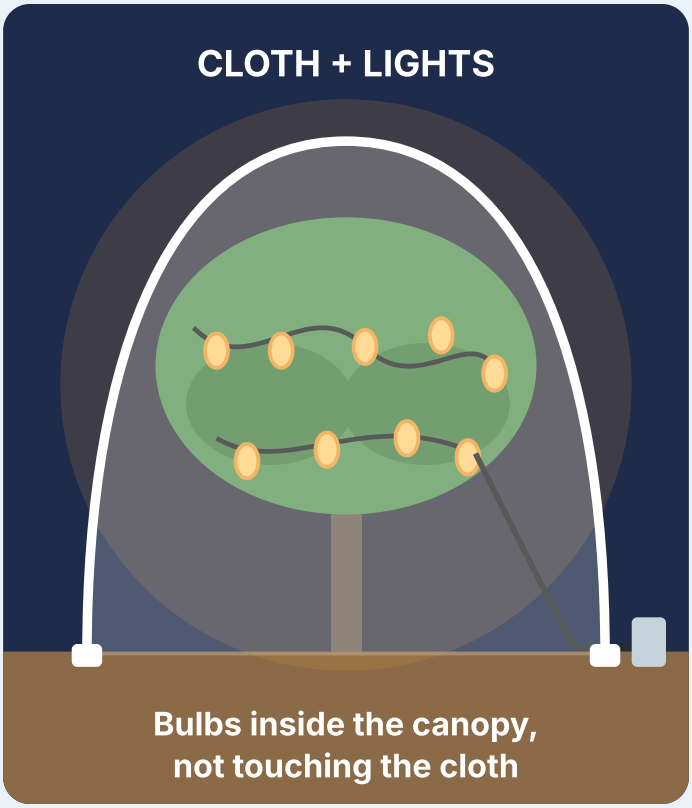
Thin store cloth is fine for a light frost, but it falls short on a real freeze.

Sources: Colorado State University Extension; University of Arizona Cooperative Extension; Johnny's Selected Seeds.

HARD FREEZE? ADD HEAT

Put a heat source under the cloth

Frost cloth holds heat in. On the coldest nights, give it more heat to hold. Old-style holiday lights can add **up to 4°F** of protection on their own.



Use these

- Old-style **C7 or C9** holiday light strings
- A **100-watt** outdoor drop light, hung inside the plant

Not these

- **LED lights.** They look the same but give off almost no heat.
- Any bulb resting on the cloth or the leaves.

How to run it

- Turn the lights on when the forecast hits 32°F.
- Keep the cover sealed to the ground so the heat stays in.

Safety first

Use lights and cords **rated for outdoor use** with a **grounded 3-prong plug**. Link no more than **3 strings** end to end. Keep every bulb off the fabric and dry leaves.

Source: UC Master Gardeners, Frost and Protection of Sensitive Plants; Frost Protection for Citrus.

HEAT SOURCES, COMPARED

What to put under the cloth



C9 incandescent string lights · BEST FOR TREES

Gentle heat spread through the canopy. The box must say "incandescent." 25 bulbs at 7 W is about 175 W.

Example: Novelty Lights C9, 25 ft, green wire (Amazon)



Splash-proof greenhouse heater · FOR FRAMES & BEDS

For a covered frame or small greenhouse. Choose IPX4 or better with a thermostat, and aim it away from the cloth.

Example: BioGreen Palma, 1500 W, IPX4, thermostat (Amazon)



Thermostat outlet · RUNS IT FOR YOU

Plug your lights into it. Power turns on near 35°F and off above 45°F, so you're not up at 2 a.m. Use it in a covered outdoor outlet.

Example: Farm Innovators TC-3 Thermo Cube (Amazon)



Wireless thermometer · SEE IT WORK

Put one sensor under the cloth and one outside. Check the low from your kitchen.

Example: Geevon, 3 remote sensors (Amazon)



Jugs of water · FREE, SMALL BOOST

Dark jugs warmed in the sun, then set under the cover, give back a little heat. A small boost, not a replacement for lights.

Skip these under fabric

- **Heat lamps and ceramic reptile bulbs:** the bulb gets hot enough to scorch cloth and dry leaves.
- **Candles, propane or kerosene:** open flame under fabric.
- **Indoor space heaters:** not built for rain, dew or irrigation spray.

Product examples only, not endorsements; check each listing's ratings and instructions. Specs from the Amazon listings, Nov 2026.

INSTALL IT RIGHT

Pots and garden beds

The rule everywhere: cover it all, reach the ground, seal the bottom.



Our container covers can be embroidered, so they look good on the patio.

Pots and containers

Potted plants freeze from the roots up. The cold hits the pot from every side.

1. Water the pot the day before.
2. Cover the plant **and the whole pot.**
3. Close it at the base of the pot, down at the ground. **Never at the trunk.**
4. Group pots together, against a warm wall.



A cut piece over a bed, pinned down at the soil.

Garden beds

1. Water the bed the day before.
2. Hold the cloth up off the plants with hoops or stakes.
3. Run it past the edges, down to the soil on every side.
4. Pin it with soil, staples, sandbags or clamps.

For best results: keep the cloth off the leaves

Leaves pressed against cold fabric can still get frost damage. Our container covers come with support poles that push into the soil and hold the cloth up.

INSTALL IT RIGHT

Frames and trees



A sewn cover on a Thrive Frame. It closes tight at the base.

Over a frame or hoops

A frame keeps cloth off the leaves. Leaves can freeze where a cover touches them.

1. Drape the cloth over the frame and down to the soil.
2. Clamp it so it can't slide.
3. Seal the bottom with zippers, grommets or weights.



A custom 8 ft cube over a whole tree, staked to the ground.

Trees

1. Water under the canopy the day before.
2. Cover the whole canopy. Use a pole or frame to lift it over big trees.
3. Let it hang to the ground **at the edge of the canopy,** not at the trunk.
4. Stake the bottom edge so cold air can't sneak under.

TIMING

When to cover, when to uncover

Follow the sun. Cover before it sets, and open up when it comes back for good.

Before sunset: cover up

Any night forecast at 32°F or below. This traps the most heat from the day's sun.

Overnight: leave it sealed

Check that no wind has lifted an edge. Low spots and open yards run colder than the forecast.

Cold, cloudy day: leave it on

Real frost cloth breathes, so it can stay on through a cold snap of a day or two.

Sun is back: open it up

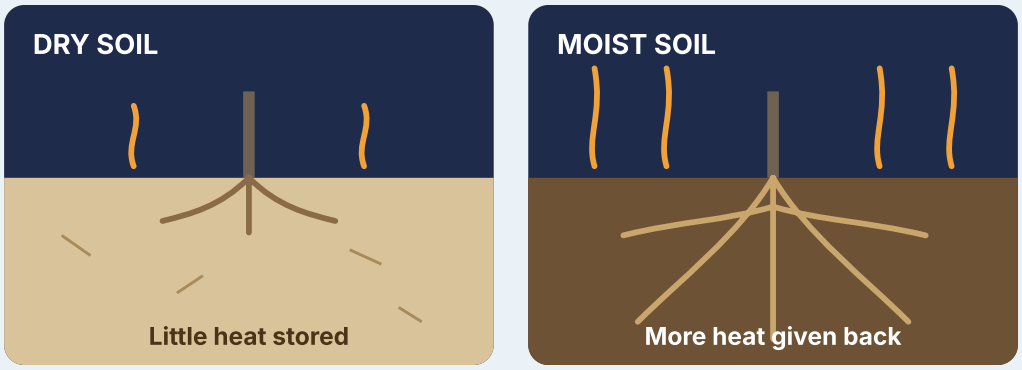
Heavy cloth lets about 30% of the light through. Let the plant and soil soak up the sun for the next night.

Never leave plastic or a wet sheet on in the sun. Both trap heat and moisture.

THE HIDDEN FROST PROTECTION

A thirsty tree freezes faster

Dry plants take more cold damage. Water protects three ways.



1. Moist soil is a heat battery

Moist soil stores far more heat than dry soil and gives it back at night. On citrus, that can mean up to 2°F warmer in the canopy.

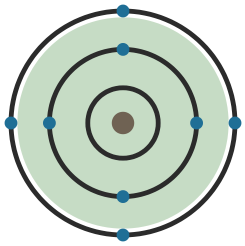
2. Frost damage is dehydration

Ice forms between the cells and pulls water out of them. A drought-stressed tree starts that night already short.

3. Trees make their own antifreeze

Over weeks of cool weather, citrus builds sugars in its cells that lower the damage point. A healthy tree does it best.

KEEP TREES HEALTHY ALL WINTER



ThriveRing™: deep, wide, and infrequent

Rings of drip line water the whole root zone evenly, out past the canopy, on a timer. For canopies up to 18 ft.

See the ThriveRing kit

Before a freeze: deep-water the root zone a day ahead. Moist, not soggy. In fall, don't push tender new growth: it freezes first.

Sources: UF/IFAS Extension; UGA Extension; Mississippi State University Extension; Texas A&M AgriLife Extension.

OUR COVERS

Sewn in Tucson from the heaviest cloth we could find

Every cover starts as **DeWitt Ultimate 2.5 oz frost cloth**, the heaviest DeWitt makes. We cut it, sew it, and close it tight at the bottom.



Stitched on an industrial machine.



Container covers hooped for embroidery.



Pretty enough to leave on the patio.

Thrive FrostBlocker
For pots. Slips over the whole pot and cinches at its base. Four sizes.

Raised bed covers
Sewn to fit 4×4 and 4×8 Thrive Frames.

Custom tree covers
Zip on and off, with grommets to stake down.

Raw cut pieces
Any size. Add a grommet border or YKK zippered corners.



NEXT STEP

Cover up before it hits

One hard freeze can undo years of growth on a citrus tree. A heavy cover that reaches the ground is the difference.

SHIPS ANYWHERE

Shop frost covers, or get a custom quote

Pot covers, raised bed covers, whole-tree covers and raw cut pieces, all sewn in Tucson from 2.5 oz cloth. Send us your sizes and we'll quote it, shipping included.

Shop frost covers | **Get a custom quote**

QUESTIONS?

Call (520) 261-7021

Tell me what you're covering and I'll help you pick the right size.

Happy gardening, Michael

Sources: University of Arizona Cooperative Extension, Frost Protection; Colorado State University Extension, Frost Protection and Extending the Growing Season; Johnny's Selected Seeds row cover chart; DeWitt Ultimate 2.5 oz specs; UC Master Gardeners, frost protection; Mississippi State University Extension; Texas A&M AgriLife Extension; NOAA 1991–2020 Climate Normals; National Weather Service Tucson.

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