

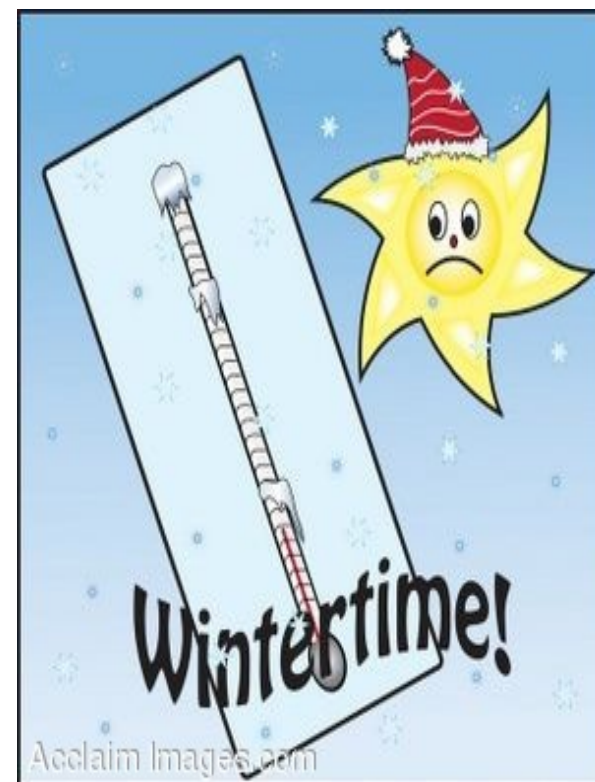
Winter Protection for your Plants



- Florida Native Plant Society
 - Villages Chapter
 - November 10, 2023
 - Gary Babic
- Sumter County Master Gardener

Cold Protection of Landscape Plants

- Yes, we do have a winter in central Florida
- Cold temperatures can damage tropical and subtropical plants
- Read the labels – some plants sold here as “outdoor” are not recommended for below 50 F
- Freezing temperatures are a special concern



But I have native plants!

Native plants are a good bet, BUT not all FL native plants are native to our zone

Right plant, right place

Some won't survive here

Here's one – Native Porterweed

Up to Zone 9B per FNPS

Stachytarpheta jamaicensis



Know your plants

- Tropical plants and summer annuals do not adapt or harden to withstand temperatures below freezing
- Subtropical plants may be able to withstand freezing temperatures – in certain circumstances
- Recently planted, unestablished plants are particularly susceptible
- Avoid late summer or early fall pruning, which encourages tender new growth

Some happy surprises

- Coleus and Hawaiian Ti plant will die back to ground with freeze but sometimes come back and look even better



What happens to plants in winter?

- Many plants / turf go dormant
- Triggered by
 - Shorter days
 - Less light
 - Not by cooler temperatures
- But dormant plants are still alive, often growing roots to prepare for spring
- The ground does not freeze here

The Villages is in a cold pocket

- We are in USDA Zone 9a – this means we can expect a “hard” freeze, with temperatures of 25 F for more than 4 hours



Forecasters have the same map

- Look familiar?



Different kinds of freezes

- Calm, clear nights
- Heat radiates from the surface into the air
- When the air is moist, it can condense as frost onto the surfaces
- This is the “frost on the roof”
- Technically, “radiative freezing”
- Plant damage can be minimized



Different kinds of freezes

- Cold air blows in
- Windy
- Sudden drop in temperatures
- What we had in Dec 2022
- This is the bigger problem
- Hard to protect plants



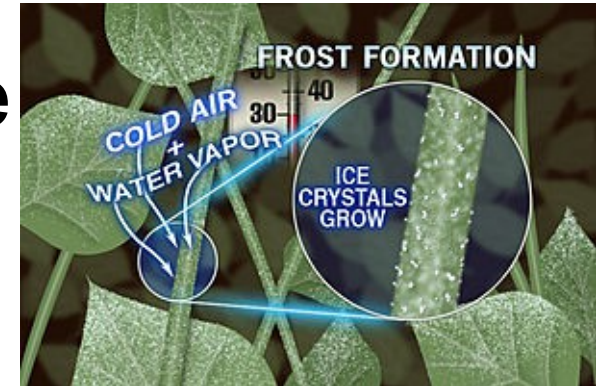
How Cold Affects Plants

- The ability of a plant to withstand a freeze depends on temperature fluctuations and the day length
- Gradual decrease helps plants adjust
- This is why a sudden temp drop in November is worse than one in January
- Worst case – above average temperatures in winter so plants do not adjust, then a freeze



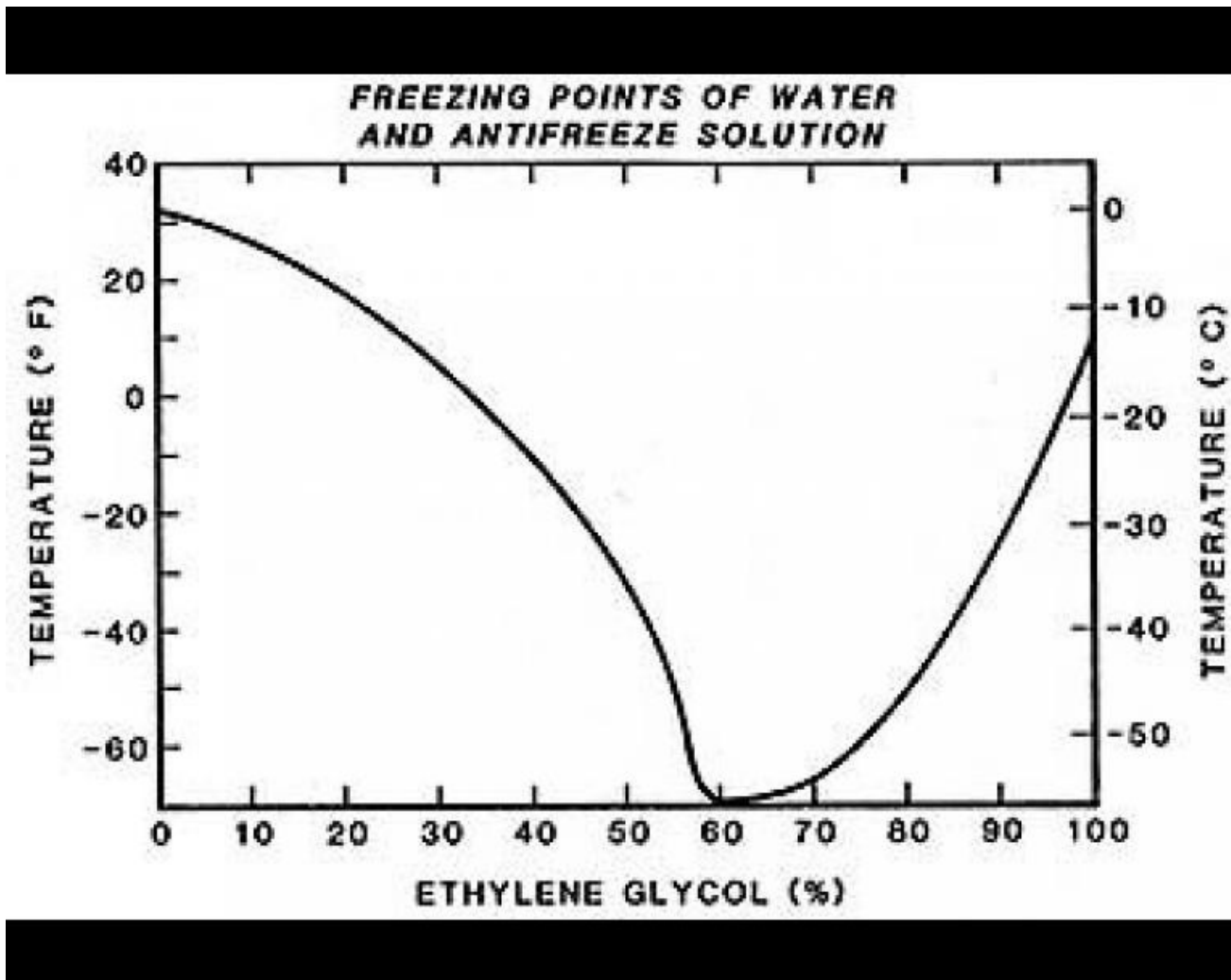
What happens to the plant?

- Flowers, fruits and roots have little ability to withstand freezing temperatures
- Cold injury to roots in container plants is common but not noticed until spring
- Ice formation inside leaves kills them
- Dry winds and bright sun can dry out plants because roots do not work well in winter
- Plants need water in their cells like we need oxygen



Some plants make antifreeze

- Small amount of glycol drops freezing point



What to do before a freeze

- If you have plants suited to zone 9a, you don't need to do anything!
- Otherwise, we have some ideas...



What to do before a freeze

- Your yard contains several “microclimates”
- One or two degrees is significant
- Understanding this helps with protection
 - Low area = colder; don't plant sensitive plants here
 - Tree canopies trap radiant heat
 - Fences, walls, windbreaks protect against cold wind
 - Next to your house – always losing some heat
- Fertilize to strengthen plants? NO
 - Fertilizer often encourages tender new growth

What to do before a freeze

- Watering soil before a freeze can help protect plants, esp containers
- Well-watered soil stores more heat
- Too much water can rot roots
- DO NOT water leaves
- DO NOT water during the freeze
- This works for farmers who keep the plants wet before, during and after the freeze – several hours worth of constant watering

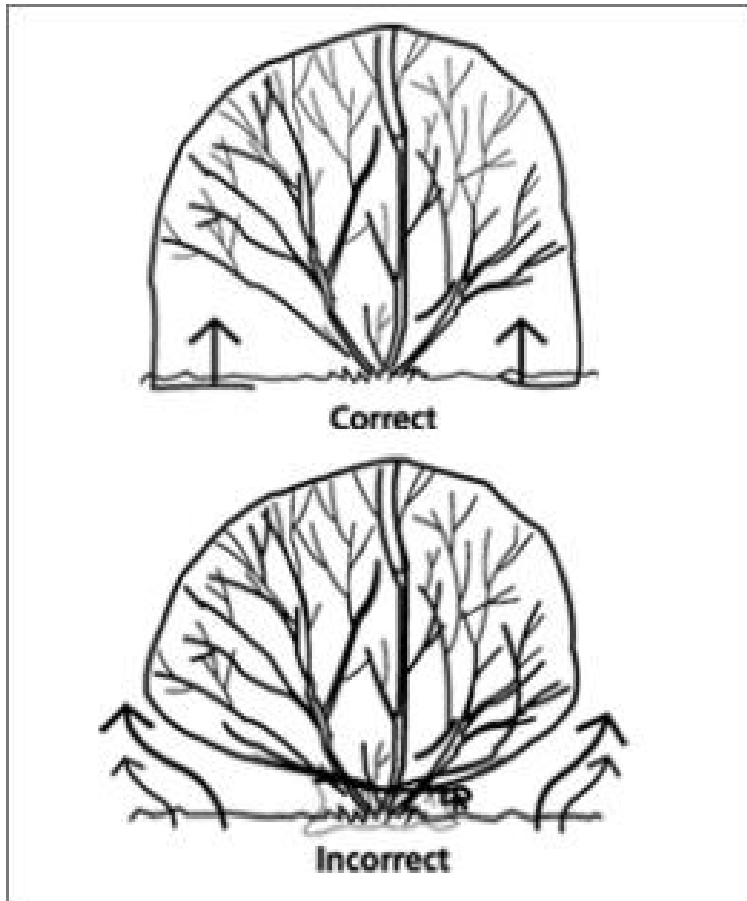


How to protect plants in a freeze

- Move containers into protected area
- Use the heat in the soil to your benefit
 - Mulch insulates and keeps heat in
 - Covers like frost cloth, sheets, cardboard box, etc
 - Not plastic, does not hold in heat
 - Must cover all of the plant and must extend to the ground and be secure to capture the soil's heat
 - Christmas lights (not LEDs) do work
 - Best for the cover to not touch foliage if possible
 - Putting a “roof” over a plant to protect from frost is useless

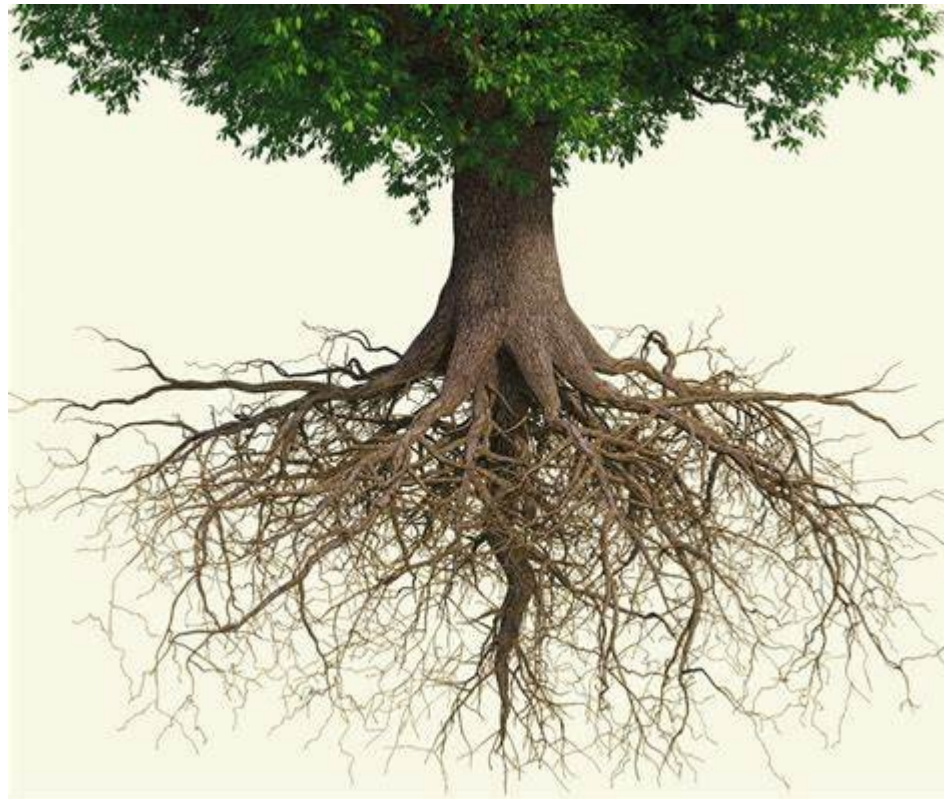
Proper Cold Protection

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Two key things to remember

- Roots need water, so water thoroughly before the freezing weather
- The heat in the ground is your best friend

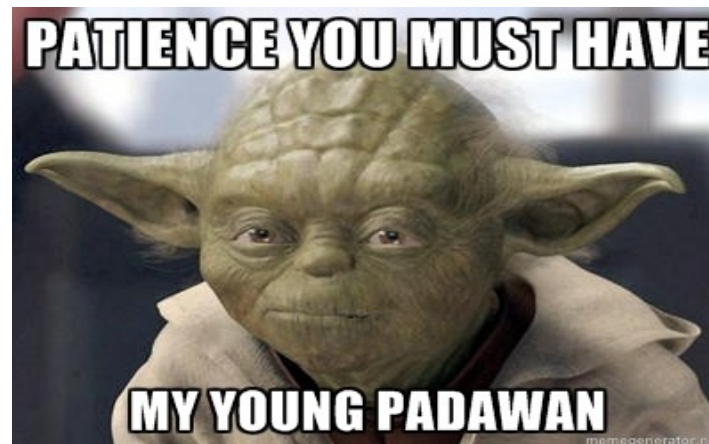


After the freeze

- Remove any covers, let the sun warm up the plants
- Can easily dry out a plant if covered too long
- Plants can lose a lot of moisture during a freeze
- Cold roots are not good at transporting water into the plant
- Container roots can even freeze
- Apply water to allow thawing and rehydration

After the freeze

- The leaves are dead
 - Can be removed, to be expected
- Branch tips are dead
 - Can check by scraping a bit of bark off
 - BUT – better not to do anything
- The dead tip will protect against the next freeze
- Be patient



After the freeze

- Some plants, esp palms, may not show freeze damage. But if the center stalk is froze, the tree is essentially dead even if there are green leaves (fronds).
- Damage may not be evident for months



After the freeze



Dormant is not Dead

- Your dormant landscape is still very much alive
- Root systems are growing to support spring demand for leaf and flower production
- All kinds of critters from microscopic to insects are in a resting state (diapause / estivation)



Waiting for spring – the hardest part

- Our last frost date is March 21 (really)
- In 2014 we had a warm February followed by a freeze on March 29
 - Worst case scenario
 - Many plants thought it was spring and put out new buds
 - They died
- Avoid the temptation to prune before March 17
- Pruning leads to tender new growth



Waiting for spring, part two

- Don't rake up dropped leaves
- Don't stir up mulch
 - Insects overwinter in these layers in several forms (larva, pupa)
 - Tidying up can kill them
- Don't remove dead flower stalks
 - Seeds can help overwintering wildlife



Winter Annuals

- Cold weather – bring it on!
- All prefer full sun
- Be sure to water well to establish
- For maximum effect, limit the number of colors or varieties
- Deadheading will encourage continuing flowering through spring
- Here are a few examples

Pansies and Violas

- These are special for two reasons
 - They can handle less than full sun
 - Do not plant until December
- Flowers through May
- Names interchangeable in nursery trade, but:
 - Violas – 3 up, 2 down
 - Pansy – 4 up, 1 down



Snapdragons

- Plant in October, flowers through May
- Many colors and sizes
- Host plant for Common Buckeye butterfly



Dianthus

- “Carnation-like flowers” / Sweet William
- Excellent bedding plant
- Many varieties
- Plant in October, flowers through May or even year-round



Ornamental Kale

- Loves cooler weather, plant in November
- Many colors available
- Great accent
- Edible too



Calendula

- Aka Pot Marigold
- Plant in October, flowers through May



Calibrachoa

- Aka Million Bells
- Small, petunia-like bell flowers
- Every color imaginable
- Plant in October, flowers through June
- Low-growing



Know your plants

- Right plant, right place
- Plants appropriate for zone 9a will not have lasting frost damage
- For sensitive plants:
 - Optimum microclimate
 - Prepare before the freeze
 - Act after the freeze
- You and your plants will be happy

