

# Bonsai Winter Care in New England

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## Know your plant

When I buy or collect a pre-bonsai or bonsai plant, I try to get as much information as I can about the specific plant I am considering buying.

Before I would consider buying any plant, I like to have the Genus, Species and its hardiness zone rating. Then I research the plant look up what all the authors of my reference books have to say about the plant and its requirements, and bonsai suitability. This I believe is the key to successfully caring for Bonsai trees, I only lost two trees last winter, and two out of 200 is not bad.

## Hardy, Semi-Hardy, Sub-Tropical, and Tropical designations

Many bonsai sellers and book authors use the false terminology, Indoor and Outdoor Bonsai. All trees are outdoor trees. I prefer to use the categories listed below and sort trees by their hardiness zones.

### Hardy

Trees Hardiness zone rating: 2, 3, 4, 5, 6. some examples of bonsai plants in this category are: Larch, Apples, Hawthorns, Elms, Japanese Black & White Pines, False cypress, Boxwood, Juniper, Wisteria, Spruce, Hornbeam, Cherry, Yew, Zelkova, Japanese Maple and some Azaleas

### Semi-Hardy

Hardiness zone rating 7. Some examples of bonsai plants in this category are: Silver Thorn, Kumquat, Fushia, Japanese & Chinese Privet, Buddhist Pine, Bay Laurel, Chinese Elm, Trident Maple

### Sub-Tropical

Hardiness zone rating 8. Some examples of bonsai plants in this category are: Serissa, Rosemary, Crape Myrtle, Gardenia, Texas Ebony, Rosemary, Pomegranate

### Tropical

Hardiness zone rating of 9. Some examples of bonsai plants in this category are: Ficus, Bush Cherry, Black Olive, Fukien tea, Malpighia, Jaboticaba, Orange jasmine

## Understanding to process of going dormant

Most **hardy** trees require a dormant period, and will weaken and may even die if not given one. Once dormant hardy trees can survive very cold temperatures', trees hardy to zone 2 can survive temperatures of -50 deg. above ground. The process of going dormant requires time, weeks of shortening day length and cooling temperatures triggers the tree to start making its own anti freeze of soluble sugars and proteins. Allow your hardy trees to go dormant before putting them away for Winter. Do not prune trees until trees are clearly dormant. Late season pruning may cause late season growth that will not harden before frost hits causing winter kill.

### **Ground, different then Bonsai pot**

Trees with their roots in the earth can withstand negative temperatures because their roots are kept warmer then the air by the insulating and heat sink capability of the earth surrounding them. Plants with their roots above ground in a pot can have their roots almost at the same temperature as the air surrounding the pot. Hardy Bonsai root systems need protection from the wide fluctuation and low temperature extremes we get here in New England. Most hardy trees can survive root zone temperatures down to 18 deg. with no damage if allowed to normally enter dormancy.

### **Winter Storage Requirements**

Hardy trees in Winter storage require cold constant temperatures, most trees dormancy requirements are met when they are stored 32-40 deg. for at least 2000 hours (two months) if possible. If you can't keep them above freezing it is OK to let them freeze but try to keep the root zone of the plant above the deadly temperature of 18 degrees. The location should give the tree protection from wind damage, desiccation. Easy access is ideal so you can monitor your tree for moisture needs and work on them while in storage.

### **Over wintering locations**

Every location is unique, and requires monitoring. The location should protect your dormant hardy trees roots from temperatures above 50 and below 23 degrees. Some locations that have worked for members of our club are: Green house / hoop house, cold frame, cellar way, unheated garage or shed, and three seasons porch, Another way is to just bury your hardy bonsai in the ground (soil), over the rim of the pot, in a location with some wind protection. If your pot freezes, know that ice helps maintain the safe temperature range of slightly below freezing, ice is our friend when overwintering bonsai here in N.E.

### **Monitoring your stored trees**

Trees stored under cover, green house, cold frame, etc. need monitoring for moisture needs especially when temperatures rise above freezing. Before watering check if root ball is frozen, do not water when roots are frozen. If you are going away or think that the tree needs water but it is too cold to water, snow or ice can used. The snow or ice will provide water when the temperatures rise above freezing. Water the trees well before putting them away for the winter. I find that the trees I have stored in my bulk head and cold frame only need water two or three times during winter. The ones in the ground usually get all they need from snow and rain but I do recommend checking them if we get a warm spell. You also should check your trees regularly for rodent damage if you find any wrap your tree's trunk with hardware cloth or tree wrap. Dormant trees do not require fertilization but a Fall application before leaf fall will help them prepare for Winter.

### **Waking your hardy trees from dormancy**

Trees lose their ability to withstand cold rather quickly in the spring so try to keep them cold, below 50 deg. as long as possible. I believe more trees die in spring because of exposure to warm temperatures then the cold winter temperatures. Extended warmth wakes them from dormancy, and then a cold snap hits them while their natural defenses are down. Be patient. Leave bonsai in winter quarters until night time temperature is reliably above 40 degrees.

### **Sub-tropical, and tropical tree winter care**

I over winter my Sub-tropical trees under lights in my cool (45 - 60 degrees) damp basement, they seem to like it there. My fluorescent lights are very close to the tops of the plants, touching almost. The 3 foot fluorescent Shop Light fixture has one cool white bulb and one full spectrum bulb both are 40 watts with 1600 lumens. I like to keep a small fan running to keep the air moving and the inherent bug problems down to a minimum. I have to water them almost every other day.

My tropical trees I keep in my sunniest window I have and they survive the winter but don't really thrive. To properly care for them you really need a heated green house/sun room or very expensive to run full spectrum metal halide lighting system. They need watering almost daily. I carry them to the sink and spray them from above with the water wand. I believe this keeps them clean and helps wash away the pests that inevitably show up on house plants. I enjoy having the tropical trees to play with while my hardy bonsai are resting.

Further Reading/Sources: [www.Evergreengardenworks.com](http://www.Evergreengardenworks.com) article Freeze Damage of Woody Plants, Winter, Ground is Different than a Pot, [www.internetbonsaiclub.com](http://www.internetbonsaiclub.com) knowledge base, seasonal care

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