



UNDERSTAND | APPRECIATE | CONSERVE

thearb.org

Winter in the Garden

November - February

Even though our gardens are asleep, the year begins in winter! And there is plenty to do. If you don't have a garden of your own, winter is the time to look for open community plots. It's time to consider the seeds you'll be looking to purchase or trade this year. Look for short season varieties of annual crops and ever-bearing varieties of fruits. Emphasize cool season crops, especially if you can't access a greenhouse or cold frame. Which perennials are you looking to add to your space? Consider your garden design and *observe*. Pay close attention to where snow accumulates in your yard, and to the patterns of snow melt to discern cold and warm spots. Draw your plans for a hoop house or cold frame. Prepare your compost and mulch pile for spring.

Effect of High Altitude Winters:

Winter temperatures fluctuate dramatically at high elevations in Northern Arizona. Typically varying 30 - 50 degrees (F) in a single 24-hour period. As the days warm above freezing, the surface cells in a plant also begin to warm. As it plummets back below freezing at night, that young tissue is especially prone to damage. Repetitive freezing and thawing also affects the soil, known as heaving. This can expose a plant's roots, subjecting the roots to desiccation and/or freezing. Wind is also a factor of young tissue damage. High winds increase the rate of moisture loss (transpiration) while the water in the soil is still bound by ice and unable to replace what's lost aboveground.

How to Minimize Winter Stress:

Pruning: Snow presents a particular problem of structural damage to shrubs and trees. Large branches with large surface areas are the most susceptible to breakage from heavy snow and ice. Inspect plants at the beginning of winter and begin preventative pruning, finish pruning before the first big snowfall if possible. Keep in mind this should be a minimal amount of pruning to prevent breakage only, you do not want to encourage new growth at this time nor desiccation at freshly made cuts. Where pruning isn't possible, try to remove built up snow and ice from plants and branches struggling under the heavy load. If branches break, prune off damaged material to minimize additional damage.

Watering: Even dormant plants continue to transpire during winter. If woody plants, especially evergreens, go into winter with their roots in dry soil they could suffer. Rain and melting snow will not reach the roots through frozen soil. It is important to give your trees and shrubs a thorough watering before the ground is frozen and before mulch is thickly applied. This protects against drought stress and heaving. Monitor precipitation. In long periods of drought, try to give your recently planted trees and shrubs a deep watering at least once a month, if and when the ground is not frozen solid. Established trees and shrubs, especially native species, should be able to maintain enough moisture to get through substantially dry winters.

Mulching: Once soil has frozen in early winter, mulch around the base of shrubs and trees with an organic material to the depth of 6-8 inches. Use wood chips from your local arborist, pine needles, autumn's leaf pile, or a mix. The insulating effect will help prevent heaving and encourage dormancy during periods of occasional warm weather. Snow also acts as an insulator. For ground cover plants, use a lighter material that will allow air circulation to prevent rotting, pine needles, wood shavings, or leaves. Remove mulch early in the spring to allow the soil to thaw. This will allow the roots to absorb water before bud break. See more in the "Spring" section.

Wind Protection: Setting up wind blocks protects smaller shrubs and trees. Techniques include wrapping with burlap, placing cardboard or other stiff material around the plant,

and/or stacking straw bales on the windward sides of plants. Observe your garden for wind and sun scald to see which species and areas need more protection.

Maintenance: Caring for tools is always a must. Gather your blades, shovels, hoes, mowers, and other cutting tools to sharpen. Scrub the metal components with steel wool and WD-40 or other lubricant. Linseed oil works well on wooden components. Oil any moving parts on your machinery. Be sure to dispose and store oils and lubricants properly. And store your rags properly in a fire proof container.

