Use gypsum in place of sulfur for onions.

Desert Favorite by Norman Schilling

African Sumac (*Rhus lancea*) is native to the arid lands in South Africa. It is a semiweeping tree with textural bark and often-beautiful form. The bark starts out a light tan-gray in young wood that, with age, cracks, revealing reddish hues. Eventually, old wood becomes dark gray and rugged. It is often sold as a single trunk tree, but I much prefer it as a multi-trunk. The form is open and spreading, and branch tips weep gracefully downward. The leaf is composed of three 4” narrow, pointed leaflets. When new leaves first emerge, they look distorted and seem stuck to each other - this is normal. The flowers are insignificant. The fruit is small, yellow to red 'berries', and can be quite annoying over concrete or the like. This species often wants to produce lots of 'watersprouts', tall, vigorously growing, very straight branches from inside the tree's canopy. These should be pruned out, as well as other structural pruning to enhance and show the trees beautiful structure. However, be careful not to over-prune, by not removing more than 25% total foliage in a year. Over-pruning encourages even more vigorous water-sprout production. This tree can reach mature sizes of 30’ tall and 35’ wide, but rarely exceeds much more than 20’ high. It is very drought tolerant. In times of drought, it merely sheds some leaves, more as the drought progresses. In high-water situations, it produces lots of foliage and wood to support it, and the trees natural beauty becomes obscured. It is especially important to avoid frequent irrigation in heavy, slow-draining soils. If watered (deep, wide soakings) only 10 to 15 times per year, the tree remains open and airy, and much more attractive. African Sumac is hardy to about 15 degrees, but can suffer some damage to foliage and twigs around 20 degrees. It is quite 'messy', but I look at the leaf litter that lies beneath mine as beautiful tan mulch. It also tends to produce ' suckers' from the root system, especially if roots have been cut or damaged, or if the tree suffers extensive cold damage. If this occurs, push a little soil out of the way to see where the sucker is attached, and cut it off almost flush at that point. Persistence in removing suckers will eventually reduce or eliminate this problem. It is readily available at most nurseries.
Companion Planting

Start cabbage from seed! I can't emphasize this enough. So many pests come from transplants. You can plant cabbage from August all the way through February – get them sprouted under some cold protection.

Celery, dill, onions and potatoes are the best companion plants for cabbage. Planting Geraniums with cabbage can repel cabbage worms. Hyssop will improve the growth of the cabbage and deter cabbage moths. Celery improves growth and health of cabbage. Thyme and cabbage can be paired to control cabbage maggots, cabbageworms and white cabbage butterflies. Dill can improve growth and attracts honeybees. Mint will improve the flavor and growth of cabbage. And, in the spring, plant Chamomile with cabbage as it improves growth and flavor.

If you haven’t planted cabbage yet, it’s not too late to get some seeds!

November Herbs

<table>
<thead>
<tr>
<th>Harvest</th>
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<tbody>
<tr>
<td>L= Leaves, F= Flowers, S= Seeds, R= Roots</td>
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| Prune |
| Geraniums, lavender, lemongrass, lemon balm, mint, rosemary, and thyme |

Winter Pest Management in Backyard Deciduous Fruit Trees

All deciduous fruit trees are susceptible to insect and disease problems affecting fruit quality and tree health. The winter dormant period, which occurs after leaves fall but before buds begin to break open in the spring, is the best time to manage several problems. Key management practices at this time of year are:

- Pruning to remove dead, diseased, and broken branches, promote vigor, open the canopy to sun and improve air circulation.
- Sanitation to remove mummified fruit on the tree and diseased wood, fruit, and leaves from the ground.
- Applying dormant oil sprays to control pests.
- Applying dormant or delayed dormant sprays to limit infection and prevent the spread of certain diseases.

An excellent little publication, by the University of California, examines these items: [Can be found here!](#)

November Reminders

1. Plant fall vegetables and flowers.
2. Trim unwanted sprouts from the interior of citrus trees.
3. Last chance to plant spring flowering bulbs.
4. Fertilize Christmas cactus and get ready for the blooms.
5. Reduce watering of all warm-season succulents.
6. Pomegranates are ripe!
7. Plant spring wildflower seeds.
8. Resume regular fertilizing of roses.
9. Mulch bulb beds to protect root zone.
11. Aerate established lawns and over-seeding if you haven’t yet.
12. Prune cold-hardy summer-flowering shrubs.
You know you’re addicted to gardening if you have dirt everywhere! In your house, in your car, under your fingernails and on your shoes, even the good ones!

Christmas Luminaries

The concept of luminarias, which are brown paper bags partially filled with sand and then illuminated from the inside by a candle to create a lantern-like appearance, was said to be introduced to America by the Spaniards, who adopted and adapted the idea from the Chinese. Though global in creation, luminarias are typically found most often seen in the winter, lining roadways and walkways in the days leading up to Christmas.

Imagine luminarias lining the twisting pathways that winds through your yard. Among the cactus and succulents, these glowing bags cast a wonderfully mysterious luminescence during the holiday season. All lit up for a cherished event complete with live music, storytelling and wonderful, homemade goodies.

Electrically-lit luminarias are also used, consisting of a string of standard incandescent "Christmas lights" with the bulbs covered with a tan plastic sleeve, made to about the size and shape of a small paper bag.

How to Make Them:

Fill the bag with about 3 inches deep of a sandy mixture to be sturdy and support the candle and the bag. Set a 3 hour window for the luminarias to be lit enabling neighbors to enjoy them with a nice walk. And it’s as easy as that! Here is a snapshot of what a walking path looks like lit with luminarias.

Organic Pest Control

Dormant Oil Recipes

Several dormant oil recipes are available and help control pests on fruit trees. This dormant oil formula, developed by scientists at Cornell University, controls overwintering pests and foliar diseases on many plants. It contains 2 tablespoons of ultrafine canola oil and 1 tablespoon of baking soda mixed with a gallon of water. Cornell University scientists also developed a nourishing formula containing 2 tablespoons of horticultural oil, 1 tablespoon of baking soda, 1 tablespoon of kelp and 1 tablespoon of mild organic dish soap mixed with 1 gallon of water. Another dormant oil recipe contains 2 tablespoons of baking soda, 5 tablespoons of hydrogen peroxide, 2 tablespoons of castile soap -- which is made from an olive oil base -- and 1 gallon of water.

Link to:
Resource Guide for Organic Insect and Disease Management
Winter injury to plants is a common problem throughout Nevada. Damaged plant parts dry out, die or become diseased; ultimately, the whole plant may die. Dry soils, dry winter winds, warm, sunny days and freezing nights without precipitation contribute to winter plant damage.

**Plant Selection** --People frequently attempt to grow semi-hardy, poorly adapted plants because of their desirable ornamental characteristics. Unfortunately, in order to maintain an acceptable appearance, avoid damage or just survive, these plants require expensive protective care. Avoid this trap. Consult your local Nevada Cooperative Extension agent for a list of winter-hardy ornamentals for your area.

**Soil Modification** --Hardpans and caliche layers impede water flow and root growth. Water from winter precipitation causes waterlogged soils and shallow rooted plants. Waterlogged roots rot and die. Likewise, root impenetrable layers create shallow rooted, poorly anchored plants subject to frequent drought stress. Before planting, break up hardpans and caliche layers by tilling 24 to 36 inches deep. Soils in Nevada contain little organic matter. Consequently, many ornamentals grow poorly and are susceptible to winter injury. Before planting, mix liberal amounts of organic matter into light, sandy or heavy clay soils to promote the following:

- Water movement into soils. This reduces ponding, surface runoff and erosion. * Drainage in heavier soils.
- Increased water holding capacity in sandy soils.
- Increased soil oxygen levels to greater depths in heavy soils.
- Greater soil nutritional levels (increased cation exchange capacity). * A larger population of beneficial soil microorganisms. * A lower soil pH, reducing soil alkalinity.
- Improved root growth into a larger, deeper volume of soil.

These factors improve plant growth during summer and reduce potential winter stress. Most types of organic matter provide these benefits when mixed into the soil. Avoid using fresh manure as it contains too many salts. Well-composted manures will not "burn" plants and have fewer weed seeds. Canadian peat moss and bark are excellent, but often expensive or not readily available.

**Injury To Late Season Growth** --New growth produced late in the fall will not survive freezing temperatures; however, season-old tissue is not as easily damaged by cold. Discourage late-season growth. Do not apply fertilizer to shrubs and trees within six weeks before the first expected fall frost. Do not prune late in the year except to remove dead or diseased parts. Reduce irrigation rates and frequency as days become shorter and cooler, but do not allow the soil to dry out.

**Excess Loss Of Plant Moisture** --Evergreen plants continue to lose moisture during the winter. Water loss is greatest during windy, sunny, mild weather. If the ground is frozen below the root zone, water is unavailable to plant roots. Consequently, internal plant water becomes inadequate to compensate for that lost from the plant. Leaves of broad-leafed evergreens curl inward and hang down when water loss exceeds uptake. Under severe conditions, leaves "burn" at their margins, turn brown and dry out. Well-
adapted, narrow-leafed evergreens, such as yew, spruce and juniper, and many non-evergreen trees and shrubs, also suffer winter desiccation injury.

Daily heating and freezing accompanied by wind and bright, sunny skies, damages exposed limbs and trunks, most commonly on their south and west sides. Sunburned and dehydrated bark splits, cracks and dies, especially if the plants have thin or young bark. Flower buds of many plants may abort over winter, eliminating spring flowering. Leaves, buds and twigs may desiccate. If water stress is prolonged, entire plants die.

When plants are transplanted, many small, moisture absorbing roots are lost during digging and handling. If planted too late in the fall, the soil is too cold for rapid root growth. Consequently, broad-leafed evergreens which are most susceptible to winter injury should be planted in spring or early fall. Fall planting is preferred for most plants. Transplant plants late in the season to avoid long, hot, dry days, but early enough that soil temperatures remain warm. This allows rapid growth of new roots. Do not plant if the ground is expected to freeze within six weeks. Applying 3 to 4 inches of mulch in a 3 to 4-feet circle around the plant retains soil moisture and warm soil temperatures longer, prolonging root growth. Plants with an established root system will grow best during the spring and summer compared to a spring transplant placed in cold, wet, spring soils. In areas where the fall is short and soils freeze quickly, plant in the spring.

During severe cold the ground may freeze below the root system, and eliminate the supply of available water. Shallow root systems often dry out and die when exposed to daily freezing and thawing during dry, cold weather. The insulation qualities of mulch will reduce soil drying and slow, deep freezing. Three to 4 inches of mulch will prolong the period before the penetration of frost stops root growth and water absorption. Give plants a deep soaking just before the ground freezes each fall and water whenever the ground thaws, but not more than once a month in winter. This is particularly important for evergreens.

Drought, low temperatures or prolonged flooding may damage or kill all or part of a root system. However, injury symptoms such as twig die back, bud abortion, leaf scorch, leaf drop, and stunted growth may not be evident until late spring, often after growth has resumed. Because only part of the root system may be damaged, the plant appears normal until higher temperatures, wind and longer days create a demand for moisture that the roots cannot supply. Although the plants show stress in spring, the damage occurred earlier.

**Winter Wind and Sun Stress** --When direct winter sun heats the leaves of evergreens, stomates open and water is lost. The temperature of bark and twigs exposed to direct sunlight exceeds air temperature. Daily freezing and thawing of plant parts causes cracking, drying and death. Reflected sunlight from light-colored buildings, fences, soils and snow may also stress plants in winter. Even hardy plants exposed for long periods to bright conditions are often damaged if soil moisture is unavailable. Use mass plantings in the landscape to reduce water loss and locate plants, particularly broad-leafed evergreens, in the garden to avoid winter desiccation from wind, direct and reflected sunlight. Protect susceptible plants from sun and wind by planting them in protected, partly shaded or sheltered locations on the southeast, east, northeast or north sides of buildings, fences, walls’ and plantings. Protect plants growing on the sunny south, southwest and west sides of buildings or slopes from winter sun, winds and reflected light.

Temporary windbreaks, plant covering and shade may be erected for the winter using lath snow fence, screening or burlap plant wraps. Wrap evergreens with burlap and pull the branches together to reduce
water loss. Cover small plants with a slotted peach basket or clothes basket anchored to the ground. Use anti-desiccant or anti-transpirant sprays during the winter to prevent water loss from evergreen plants. Periodic applications may be required depending upon the amount of precipitation, wind, sun and the length of the winter season. These products are available at local nurseries. Use according to labeled directions.

Young deciduous trees take several years to produce sufficient canopy and twig mass to shade their trunk from the sun. Removing much of the canopy of a large tree exposes limbs previously growing in the shade to full sun and causes them to sunburn. Exposure after the leaves fall intensifies the damage.

The trunks of young trees should be covered with a spiraled, light-colored plastic protector, wrapped with a 4- inch wide strip of burlap or painted with white latex to reflect the sun's rays. Paint or screen large, recently exposed limbs as well. This will prevent sunburning cracking and dehydrating.

**Late Spring Freezing** --Plants in Nevada are often damaged by late, spring frosts. Lush, new growth is particularly susceptible. Selecting plants that resume growth late in the spring can avoid spring frost damage. However, when frost is forecast, cover sensitive plants with tarps, sheet plastic, grocery bags, blankets, etc. Uncover plants as soon as possible after the sun has come up and the temperature is above freezing.

**Repairing Winter-Damaged Plants** --After an unusually severe winter, many plants may show substantial injury. Determine the extent of the winter injury and remove damaged branches with judicious pruning. If discoloration on narrow- leafed evergreen needles is not severe, they may regain their color or produce new foliage. Broad-leafed evergreens showing leaf damage will usually produce new leaves if branches and vegetative leaf buds were not injured. Damaged leaves may drop before leaves form.

People can make the difference in how much winter damage their trees and shrubs sustain. Nevada gardeners can prevent winter injury to their perennial plants. They should:

- Select and plant cold-hardy trees and shrubs adapted to inorganic, alkaline soils and a hot, dry climate.
- Break up caliche layers and hardpans prior to planting.
- Amend light and heavy soils with organic matter before planting. * Mulch around the base of plants.
- Locate plants to avoid freezing, drying, winter winds and direct sun. * Provide winter protection, if plants are exposed.
- Maintain plants in good vigor during the growing season.
- Replenish soil moisture before the ground freezes, but after the plants have gone dormant.
- Not excessively irrigate, prune or fertilizer late in the season. Let plants go dormant.
- Remove damaged and diseased plant parts immediately to prevent invasion by insects and diseases.

With proper planning, plant selection and care, plants will survive severe winter conditions to grow vigorously, be productive and provide a beautiful landscape for all to enjoy. Success is up to the gardener.

This is a partial version of this publication. For complete publication go to: http://www.unce.unr.edu/publications/files/ho/other/fs8874.pdf
Container Gardening

Garlic

October is the best time to plant garlic, but it’s not too late right now and you don’t need a garden to grow garlic. The bulbs grow best when planted in wide, deep containers that are set in a nice sunny spot and covered with some straw.

Choosing a Garlic Variety

First decide whether to grow hardneck garlic or softneck garlic. I prefer hardneck varieties because they produce a flower bud called a scape in spring that has a delicious mild garlicky flavor. Garlic takes up little room and will not cross-pollinate, so pick a few varieties to try.

- Early California White – This is great garlic for the beginning grower, as it has a semi-rich flavor, without the hot bite of some garlic. The large cloves are sure to please. It harvests mid-late season.
- Late California White – This is the most common garlic seed on the market, and like the California Early White, is great garlic for beginners. It has a stronger flavor than Early White, is quite heat tolerant and is one of the best keepers, storing for as long as 8 months! It harvests late season.
- Inchelium Red – This garlic grows very well in the Moapa and Virgin Valleys. It usually has anywhere from 12 to 20 cloves and is large enough that even the interior cloves are generally of good size. Bulbs are usually over 2 1/2 inches in diameter and will weigh several ounces each. It harvests mid-season.

Containers

Garlic has fairly shallow roots, but it is important to make sure they have plenty of room to extend out into the soil. Choose a pot that is at least 24 inches deep and 12 inches wide. Whatever container you use, make sure that it has adequate drainage holes in the bottom. Place the container in a spot that gets at least 6 hours of bright, direct sunlight each day.

Use Good Potting Soil

Garlic is prone to fungal root diseases, so it is important that the soil you plant the cloves in drains well. Avoid using garden soil for it is too heavy and may contain insects, weed seeds, or disease organisms. The most convenient substrate to use is one of the commercial soilless mixes that contain peat moss, perlite, vermiculite, or coconut fiber. Wet the potting mix as damp as a wrung out sponge before placing it in the container. Fill the container to within about 2 inches of the rim. Do not press soil down too tight.

Planting the Garlic

Only plant the largest, healthiest cloves. Break the garlic heads apart, being careful to keep the papery wrapper around each clove intact. Plant the garlic 2 inches in from the rim of the container, spacing the bulbs 5 inches apart in all directions. Plant one clove per hole, with the flat side down and the pointy end up. Refill the hole with soil, making sure that the tip of the clove is about 1 inch below the surface. Place some straw over the surface of the soil to encourage growth and retain moisture and warmth.

Caring for the Garlic

When the garlic begins to grow, fertilize it every 3-4 weeks with a dilute liquid organic fertilizer. Keep the soil consistently moist. Cut the scapes off, and eat them, just after they emerge to encourage the bulbs to grow larger. The bulbs will be ready for harvest in late spring when the bottom 1/3 of the leaves has yellowed.