



J&L Garden Center

The All Season Gift
and Garden Center

620 North 500 West Bountiful, Utah 292-0421

The Gardening Newsletter

vol 14 issue 4

October 2001

Fall Gardening

Who knows what the weather will bring this winter or what the outlook will be next spring in our reservoirs. Water conservation will be prudent for the next several years to come. Depending on the weather, be sure to deep water your trees and shrubs once a month this fall and winter. They do not need to be watered very frequently but be sure to water them deeply until the natural moisture can start penetrating in the soil to the root system. Remember that newly planted shrubs and trees will need more attention than the older trees and shrubs in your yard.



J&L's Pumpkin Growing Contest

Pumpkin Growers, be sure to mark the following dates on your calendar and plan to attend **J&L's Largest Pumpkin Contest**. Every entry receives a ribbon, and, all pumpkins over 30 lbs will also receive a prize.

Fri to Sat Oct. 26 -27 Pumpkin Registration
Monday October 29 Judge Pumpkins
Mon to Wed Oct 29 -31 Pick Up Pumpkin & Prize

Pumpkins were not always the traditional Halloween decoration. In Ireland, where Halloween began, the first Jack-O'-lanterns weren't made from pumpkins. They were carved from potatoes, rutabagas, turnips, and beets.

An old Irish legend tells of a man called Stingy Jack. He was too mean to get into heaven and had played too many tricks on the devil to go to hell. So when Jack died, he was doomed to walk the earth carrying a lantern carved out of a turnip with a lump of coal burning inside. Stingy Jack became known as the Jack-of-the-Lantern or Jack-O'-Lantern.

From this legend came the Irish tradition of placing Jack-O'-Lanterns in windows or by doors. The Jack-O'-Lanterns were meant to scare away Stingy Jack and all the other spirits that wander around on Halloween. It wasn't until the Irish immigrants came to the United States that pumpkins were used for Jack-O'-Lanterns. Can you imagine trying to carve a rutabaga or a turnip?

You Are Invited

J&L's Christmas Open House Friday & Saturday November 23 & 24

Come and see our great selection of Christmas Decorations, Supplies and Gifts. Our Garden Center will be transformed into a Christmas Wonderland. We have a full line of **Hofert** Indoor and Outdoor Lights, **Barthelmess** (formally known as **Barcana**) Artificial Christmas trees, and many more exciting brands of decorations. We will have many decorated trees helping you see different ways you can decorate your own trees.

Come see our tremendous selection of poinsettias; available from 4" pot size through the 12" pot size (super-big plants). We will also have a huge selection of Fresh-cut Plantation Grown Christmas Trees along with a good selection of potted live Christmas Trees.

Demonstrations: Both Days

10:00 am Care of Christmas Trees

Poinsettias

Christmas Cactus

Amaryllis

1:00 pm Making Christmas Arrangements

3:00 pm Kids Time

Make a mistletoe ball or a

Pinecone Bird Feeder

5:00 pm Bow Tying Class

Prizes and Great Discounts will be available both days. Be sure to buy an Amaryllis bulb during our open house; they will be at their lowest price of the year. Besides the regular 26cm size bulbs that most stores sell, we also have the larger 34cm and 40cm size bulbs available. Many of the large size bulbs will produce four or five flower stems with four or five flowers on each stem.

Fabulous Refreshments; Gorgeous Displays; Creative Decorating Ideas; and More!

Plant Spring Bulbs This Fall

Spring flowering bulbs typically provide the first colorful blooms after the snow of winter. Most bulb species are dependable and can flower season after season. Some also make excellent choices for naturalizing in the gardens.

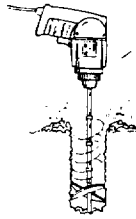


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Fall is the time for planting these bulbs.

Since bulbs are expected to keep blooming for several years, it is important to prepare the planting sites properly. Good soil drainage is probably the single most important consideration. Add compost, peat, or rotted manure to improve the top 8 to 10 inches of soil.



Fertilizer is also important. Use either **Bone Meal** or **Bulb Food** when you plant your bulbs. Put one tablespoon per bulb or spread one pound per 100 square feet of surface area. Bulbs actually have plenty of fertilizer stored prior to planting, but fertilizer will help increase flower production starting the second season.

There are many ways to use bulbs in the landscape. Mass plantings in solid beds, groups clustered in perennial beds or in rock gardens, borders along walks or patios, and foundation plantings are all good choices. Proper planning can provide color for most of the spring. Snowdrops and winter aconites start off the season in February or early March followed by crocuses, scillas, and grape hyacinth. Daffodils and tulips all have many varieties that can provide a blooming time that lasts much of the spring.

Plant bulbs early enough in the fall so roots have time to get started before the ground freezes to solid. As a general rule, plant your bulbs about twice as deep as the diameter of the bulb. Be sure to water the new plantings.

Once you've nestled those tulip and daffodil bulbs in their proper holes and patted down the earth on top, you can rest happily knowing their flowers will appear each spring for years to come. This dependable blooming habit - called naturalization - occurs with other bulbs too.

Puschikinia start blooming very close to the earth in early spring, then as the weather gets warmer, they shoot up to their full height of 6 inches. The clusters of striped blue-and-white blossom stay in flower for a month or more then quickly fade without leaving a mess. Plant them above early daffodils so the two varieties bloom together.



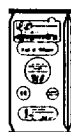
Scilla sibirica have small blue bells. They prefer shade and these bulbs will even thrive under other plants.

Galanthus often called snowdrops, are the first of the bulbs that bloom, undeterred by the onslaught of snow and ice. Their frosty white bells emerge close to the earth on short 3- to 4- inch stems. They are very fragrant and make wonderful cut flowers inside the house.

Tulipa speciosa are one of the longest lived of all tulips. They have flowers that open almost flat. They grow on stems just 3 inches tall. These are known as species tulips because they are the ancestors of our hybrid tulips. They multiply rapidly and naturalize easily.

Fall Lawn Care

October is usually a good time to fertilize your lawn. However, because of the shortage



of water, you may want to postpone your fall fertilization until November. Fertilizer stimulates grass to grow faster which in turn makes the lawn require more water. A fertilized lawn will struggle and die faster than a neglected lawn if a consistent source of water is not available; and the weather still remains hot.

Fertilize your lawn with **J&L Fall & Winter Lawn Food** as soon as the temperature drops and water is available; when mother nature starts supplying the water for you, rain or snow.

Lawn Weed Control

Lawn weeds are still growing right now. **Morgro Weedit II** is a good spray to kill most weeds in the lawn including spurge, dandelions, oxalis, morning glory, and clover. **Morgro Weedit II** will also kill flowers, shrubs and trees so be very careful when you spray. **Morgro Weedit II** will not kill any 'grassy weeds'; just the 'broadleaf weeds'. It is very hard to control the grassy weeds (crabgrass, foxtail grass, barnyard grass, etc.) this time of year. If you have any of these types of grassy weeds just pull as many as possible and apply a weed preventer next spring.



Fall is actually the best time of the year to kill both clover and morning glory. Spray for these two weeds with **Morgro Weedit II** every 10 to 14 days at least twice.

Don't Give Up Now

As fall fades into winter, yards and gardens should have been cleaned up and plants should have gone dormant. **What about the insect pests?** Most insects will be protected and will be ready to reappear next season. Many common insect pests actually overwinter in plant debris left in the garden, so it does pay to clean the garden at the end of the season. For example, cabbage worms that may have infested your cabbage and broccoli plants during the summer spend the winter in the pupa stage in plant debris left in the garden. Cucumber beetles overwinter as adult beetles in the same debris. The tomato hornworm also spends the winter as a pupa in plant debris. Lawn grubs safely rest as a larvae in the soil just below the frostline in the soil. Rotovating the soil helps to kill these pests.



Other nuisance insects (boxelder bugs, snails, centipedes, earwigs, millipedes) overwinter in sheltered areas such as under plastic weedcloth left in the gardens, in the siding of your house or in a pile of firewood. These insects may also become active during the warm spells of winter.

Some caterpillars overwinter on the actual tree they are on during the summer. Eggs are deposited in the cracks in the bark or in the crotches of branches, ready to hatch next spring. Aphids also deposit their eggs in these same areas. You may see a willow branch completely engulfed with large black aphids this

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fall or an apple tree completely covered with the cottony covering of the woolly apple aphid.

Spend some time this fall controlling these pests and you may save yourself some time and money next spring. Spray the trunk of all the trees you know that have these insects. Dormant oil is a safe organic insecticide that effectively kills both larvae and eggs, if applied at the right time. Nothing kills eggs that are completely ready for the winter weather but if you spray before the eggs are ready for winter, or just as the eggs are starting to hatch in the spring, you can have some pretty good control.

Most borers that attack trees and shrubs spend the winter as larvae inside the host tree. They spend much of the warm weather, during the winter, tunneling around and eating the tree.

Don't quit pulling weeds from your garden. Weeds produce enough seeds in the fall to supply you with enough weed seeds for the next seven years. Hand pull, hoe, cultivate or apply weed preventers right up to frost. Many weeds may still germinate this fall and grow throughout the winter.

Fall Rose Care

Don't fertilize roses in the fall. Roses need time to "harden off" before winter arrives. Roses growing too fast in the fall have new, "soft" growth. The soft growth is prone to winter injury while the older, "hard" growth will tolerate the winter weather. Reduce the amount of water you apply to your roses, again to help them "harden off" before winter arrives. Don't pick rose flowers any more this fall. Let the blossoms mature into rose hips. Hip formation also helps the rose bush to "harden off" for winter.



Prune your rose canes (except climbing roses and shrub roses) down to three or four feet high after the leaves completely freeze this winter. The only reason to prune roses in the fall is to prevent the snow from breaking the canes. Wait until spring to do your major rose pruning and shaping. In the spring, after the danger of frost is past, prune your roses to 14" to 20" tall.

Mulch your roses to protect the roots from severely cold temperatures. Let the ground and the roots freeze lightly, to become dormant, before covering them. The best way to mulch roses is to pile leaves, Soil Pep, Small Bark, or garden soil, four to six inches deep around each bush. Don't use grass clippings to mulch roses. Grass clippings can create a fungus problem that can kill your rose bushes during the winter. Put a **Rose Collar** around each bush to help keep the wind from blowing the leaves or mulch away.

Fall Pruning

Fall is a good time to get your yard into shape for winter and spring. Trim your "**summer flowering**" shrubs now (mock orange, potentilla, spiraea, etc.) but don't trim your "**spring flowering**" shrubs (forsythia, quince, lilac, etc.): wait until after they bloom next spring to prune them. If you prune your "spring flowering" shrubs now you will remove most of the flower buds for next spring. Remember, don't prune roses this time of year, wait until April.

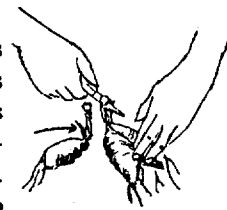


You can prune shade trees this fall, after the leaves drop. Maples, birch, willows and many other shade trees respond well to fall pruning. Many shade trees bleed if you prune them too

late in the spring. Don't prune fruit trees heavily in the fall unless you absolutely have to. The best time to prune fruit trees is early in the spring, just before they start to grow (anytime after January). Be sure to give all of your hedges and upright junipers one last trimming for the year. This final touch up makes a big difference on how they will look all winter.

Dividing Perennials

One of the joys of a perennial garden is watching the plants grow and fill the spaces allotted to them. However, perennial flowers can out grow their assigned areas quickly unless they are moved and divided periodically. Most perennial flowers do not know when to stop growing; you need to make that determination for them.



Dividing perennial flowers is not a bad thing for the plant. In fact, many plants are invigorated by dividing them regularly. Don't be afraid of breaking roots, stems, or plants as you divide them. This is a necessary evil when dealing with strong rooted plants. Don't be afraid of throwing away extra plants, or unwanted plants, or giving extra plants to neighbors. The hardy perennial flowers will take over and dominate the weaker varieties, if you don't do some refereeing. Sometimes you may need to remove an entire plant.

Divide spring and summer blooming perennials in the fall, as soon as the temperatures begin to moderate. Divide fall blooming perennials either in the spring or after they finish blooming in the fall, if there is still several weeks of good weather before the ground freezes hard. Divide perennials as often as the plant overtakes its assigned area. You may need to divide your shasta daisy or coreopsis every two or three years. Phlox, Astilbe, and daylilies may only need to be divided every 5 to 6 years. Peonies only need to be divided every 10 to 15 years.

Burning Bush - *Euonymus alatus*

This is the time of year gardeners love to watch their plants turn colors. Burning bush (*euonymus alatus*) has one of the most spectacular fall leaves. It has almost fluorescent-red leaves. It also has an interesting branching habit and an unusual cork-like bark that makes an excellent addition to indoor flower arrangements.



Some gardeners have had a hard time making their burning bush '**BURN**'. Occasionally this, and many other plants are not as spectacular as other plants nearby. If this is the case in your yard be sure to read the article **Why Do Leaves Change Color** in this issue of our newsletter. It may give you a few hints that may help your plants change colors more spectacularly.

Many burning bush have either died this summer or look very sick right now. This problem can be caused by a disease that specifically attacks euonymus, or it can be caused by extremely hot, dry conditions. You cannot control the weather nor can you kill this disease during the summer. The best you can do during the summer is to fertilize them regularly with **Ferti-Lome Blooming and Rooting Fertilizer** and make sure they are kept moist. Your goal is to try to keep them alive until you can spray for this disease later in the fall. Unfortunately, by the time you notice that your plants are sick it is often too late to save them.

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Spray all the euonymus plants, not just the sick ones, as soon as the leaves drop off in the fall. Spray with a fungicide such as **Hi-Yield Copper Fungicide**. You are trying to prevent the disease from spreading further and from getting worse. You will also need to spray your plants again just before the leaves develop next spring.



This same **Copper Fungicide** treatment (fall and spring) is also important for **lilac plants**. Lilac blight makes the lilac's leaves shrivel and turn yellow during the summer. Many lilac plants seem to just shrivel up and die for no apparent reason. You need to spray to prevent this lilac disease rather than try to cure it.

Spiders are Good Guys

Most spiders in your yard are beneficial. They trap and eat many insects that would otherwise love to cause problems for you, your flowers, shrubs and trees. Spiders effectively control flies, crickets, other spiders, dust mites within your house, and many houseplant pests. Spiders make a natural insect trap and as long as they stay outside it is to your benefit to leave them alone. Spiders may actually kill more insects than you can kill by spraying.



However, once a spider decides to invade your home it becomes a nuisance pest. Even a tiny little spider trapped in the bathtub can compel an otherwise self-assured person to scream for the nearest designated spider killer in the family to come and take care of the problem.

Most spiders inside your home are not dangerous, they are a nuisance. Two spiders are dangerous. The Black Widow spider and the Aggressive House Spider (Hobo Spider) are two spiders that can cause serious injury. The **Hobo Spider Elimination Kit** (a spider Trap) traps and kills all different kinds of spiders; not just the bad ones. This kit contains five pre-baited cards that attracts and traps spiders. You can put spider traps in several different areas of your house to catch spiders; it is an excellent way to control the unwanted spiders in your home.

Most nuisance pests are very hard to control such as boxelder bugs, flies, ants, millipedes. Spiders are no different, they are hard to control. The best control for these nuisance pests is persistence. Chemical insecticides will kill any spiders that come in contact with the spray. However, there is usually not a very long residual effect to control these types of pests. If you can prevent these spiders from entering your house the control is much simpler. Make sure your screens are in good condition. Caulk around doors and windows. Spray the outside foundation of your house in the fall; spiders are looking for warmth and protection from the weather.

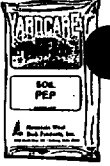
Once spiders enter your house control is a little harder. Regular applications of an insecticide inside your house may help to control some spiders. **Enforcer's Indoor Insect Fogger** is a fairly safe way to eliminate some of these unwanted pests. Vacuuming these unwanted pests is another safe way to eliminate them. Perhaps one of the best ways to control these nuisance pests is to use traps.



Next time you see a spider just repeat this sentence: "**Spiders are good guys. Spiders are good guys**".

Good Soil Cures Many Gardening Problems

The soil condition is the most important part of gardening. Without the proper soil conditions gardening can be a chore for you, and your plants will just not respond and grow the way you want them to grow. Remember, **Garden Soil is not Dirt**. Dirt is the stuff you wash out of your clothes after working in the yard. Garden Soil is a complex mixture of minerals, air, water, organic matter, microbes, and other critters. Soil is full of life and deserves your attention. With good soil, gardening will be more fun. The soil will be easier to plant in, cultivate, and it will be easier to grow your plants. Perfect soil is hard to come by in most home gardens and may take a little extra effort to achieve. The best way to improve your garden soil is by adding **Organic Materials** every year, and, the best time to apply **Organic Materials** is in the fall; not in the spring. Mix as much manure, compost, soil pep, or other organic materials (within reason) as you can afford. You will be amazed each spring how much better your soil is than it was the previous year. Many garden soils will take four, six, or even 10 years to completely change but you will notice an improvement each year. We have an excellent handout on soils and mulches. Please stop by and pick up your free copy.



One of the best mulches to add to your garden this fall is **Nutri Mulch**. Nutri Mulch is a mulch composted from a mixture of turkey manure and wood shavings.

Nutri Mulch

Composting Tips

Composting is an excellent way to make your own organic materials from your gardens. However, many gardeners experience a few problems with their compost piles. Composting is pretty simple once you learn how. We have a composting handout available so stop by to pick one up.

What can be composted

Leaves, Cornstalks, Straw, Hay, Grass Clippings, Chipped wood, Wood ash (wet), Weeds, Manure, Fruits, Vegetables, Coffee grounds, Tea bags, and most organic products in the yard.

What cannot be composted:

Charcoal and Coal ash, Large quantities of Pet Manure, Treated lumber, Large branches, Diseased plants, Mature weeds (with seeds), Weeds that spread through runners (morning glory, quack grass, bermuda grass), Meat, Bones, Dairy products, Salad dressing, Cooking oil, Peanut butter, Grease, and other Animal products.

Composting Problems

- Problem** Strong odor
Solution Turn the compost pile more frequently.
- Problem** Too Wet
Solution Add dry grass or straw. Turn compost.
- Problem** Not composting but wet.
Solution Add grass clippings, Compost Maker, or Nitrogen. Turn compost more frequently.
- Problem** Not composting and dry.
Solution Add more water or Compost Maker.
- Problem** Ammonia Smell
Solution Add dry leaves, straw or sawdust. Turn compost more frequently.

Houseplant care

Autumn is one of the most critical times of the entire year for houseplants. Autumn is the time of the year that thermostats are turned-up and the air simply becomes too dry for most tropical houseplants. By providing adequate humidity, a good location, and proper watering, the plants should grow just fine.



Green foliage plants such as philodendrons, ferns, spider plants, etc., should be fertilized sparingly during the fall and winter. In fact, you only need to fertilize them once every two or three months during the winter season. Provide adequate humidity and place them in a bright location.

Flowering houseplants like African violets, New guineas impatiens, Cyclamens, and Kalanchoes should be fertilized monthly, even during the fall and winter. Be sure they get as much light as possible and maybe even two to four hours of artificial light at night.

Poinsettias should be in a spot where they get fourteen hours of total darkness and ten hours of bright light each day. Keep temperatures between 65 and 75 degrees. Fertilize monthly with **Fertilome Blooming & Rooting Fertilizer**. Christmas cactus needs the same light requirements but require cooler temperatures of about 50 to 60 degrees. Be sure to water Christmas cactus sparingly until the blossoms begin to develop.

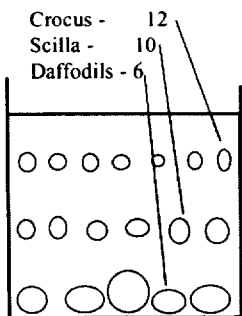
Humidity is probably the most critical part of caring for houseplants and is one of the easiest problems to correct. You can simply put a glass of water near your house plant or you can fill a saucer with pea gravel and water and then set the plant on top of the gravel. Grouping plants together can also help increase humidity. By far the best way to increase the humidity is by using a humidifier, but it is not always practicable. Do not mist plants to increase humidity because misting increases the risk of leaf diseases and of spotting on tender leaves.

Most houseplants need more light than what mother nature can provide inside your house. Try putting houseplants on the south or west side of the house preferably near a window. Flowering plants need more light than foliage plants and may require the use of a **Grow Light** to keep them blooming during the winter.

Since most houseplants go into semi-dormancy during the fall and winter months they should not require as much water as they do during the rest of the year. Check your plant's water needs weekly in the fall before you determine your winter watering schedule. You may need to adjust your watering schedule several times during the winter. You may want to invest in a moisture meter to help you know exactly how often your plants need water.

Layering Bulbs

Most beginning gardeners plant a few bulbs here and there throughout their yard. After the initial delight of the blooming flowers they are left to stare at bare spots as they wait for the foliage to die back. Another way to enjoy a longer season of flowers is to layer them. Plant them in and around pe-



rennials; you get to enjoy a succession of flowers. The layering method also allows you to plant larger number of bulbs because the bulbs are stacked in the same hole.

1. Dig a hole the size of a dinner plate, 10 to 12 inches across and 8 to 10 inches deep. You can also make larger clusters if you have the space.

2. Mix compost and bonemeal with the soil. You will not be able to add compost again for many years.

3. Place 6 daffodils in the bottom of the hole with a single Crown Imperial Fritillaria in the center.

4. Cover the bulbs with 2 inches of soil.

5. Arrange 10 to 12 scilla sibirica or scilla campanulata and cover these bulbs with 2 more inches of soil.

6. Scatter 12 or more crocus, snowdrops, or puschikinia about 2 inches below the soil line and cover them with soil. Don't worry, the lower bulbs will not have any trouble growing around the bulbs above them.

7. Gently water the bulbs long enough so water can reach the bulbs clear down at the bottom of the hole.

8. Try a different combination of bulbs in several areas throughout the yard.

Try: A mixture of 12 early, mid-season, and late tulips in the bottom of the hole with an Allium Giganteum in the center.

Try: Dutch Iris, Hyacinths or miniature daffodils in the middle layer.

Try: Anemone, Miniature Iris, or Grape hyacinths in the top layer of bulbs.

9. Use these layers of bulbs in and around your perennial flowers so you do not have to disturb them when planting your annual flowers. Hostas, Astilbes, and Coral bells all grow well among flower bulbs.

Firewood Insects

Firewood is a common item harvested in the mountains and brought home to use during the winter. Along with the firewood, you are probably bringing a few unwanted pests with you. Most of these insects will not be a problem such as ants, spiders, and some beetles. These insects are a nuisance but they do not bother your plants or your house. However, some insects brought from the mountains can be very devastating to the trees in your yard. Bark beetles and borers may find trees in your yard or neighborhood delicious and will take up residence in those trees.



To prevent bringing the bark beetles home with you be sure to only harvest 2 to 3 year old firewood. Do not bring the fresh firewood home. These harmful insects live in the living trees and in the trees that have recently died. These insects probably killed the tree. If you do bring infested wood home try to burn it before the insects have time to develop enough to leave the wood. If you cannot burn it soon enough you can tarp the wood pile and spray a chemical on the wood to kill the insects. Chemical sprays may produce toxic fumes, if you burn the wood before the chemical dissipates. Be sure your fireplace will handle these types of fumes before burning the treated wood.

Mow those Leaves

The trees are dropping their leaves and it is important to prevent a heavy layer of leaves from building up on your lawn

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before winter. A heavy layer of tree leaves will shade the grass and can smother and kill grass this fall. In addition leaf cover stimulates a winter disease called snow mold. The easiest way to dispose of leaves is to simply mow them, bag them, and use them as compost in your gardens. Extra leaves can be sent to the recycling center at most landfills.

Controlling Pests without Pesticides

If you would rather not use chemicals in your vegetable garden you can still control weeds, diseases, and insects by other means.

The primary means of controlling weeds, without chemicals, is mechanical - good old-fashioned weeding. Remove weeds with a hoe or tiller while they are still small and before they can compete with vegetable plants for water, nutrients, and light. Never let weeds go to seed in the garden. Some weeds can produce thousands of seeds from one plant. Controlling weeds can also help control insects and diseases. Many insects and diseases overwinter in weeds, as well as in flowers and in vegetable plants left in the garden during the winter. Remove, compost, or rototill old vegetable and flower plants into the soil as soon as possible after frost.

Other nonchemical methods of pest control include using mulches, preventing plant stress, rotating crops, maintaining good air circulation, timing your planting, furrow irrigation, and general sanitation.

Need more alternatives? You can use barriers, repellents, traps, baits and beneficial insects. Natural pesticides, such as soap, water, oil, sulphur, and copper can also play a part in controlling some insects. Keep in mind that despite these methods, some pests can still get out of control. Then you have to choose between using chemical controls or losing yield and quality. You may have to plant a double crop of plants: half for you and the other half for the insects.

Winter Plant Care

Some plants are much more winter hardy than others. We sell many plants that thrive in Oregon without any winter care but will struggle and die if not properly protected in Utah. Many plants that are not supposed to survive in this area will grow and flourish if they receive the correct winter care. Some plants in one area of the yard may need much more protection than the exact same plant in another area of the same yard. Sometimes it isn't just the cold temperatures that cause the problems. Sometimes it is the fluctuations in temperature or water, and the plant's current condition that cause the injury.

The first step to protect your plants in the winter is to keep your plants healthy during the spring, summer and fall. A healthy plant will endure much more winter stress than a struggling plant can.

Most frost injury doesn't occur during the winter, it actually occurs in the late-fall and in the early-spring. Early frosts in the fall can injure plants that are not quite ready for winter. Keeping plants too wet or giving them too much fertilizer in the fall can prevent plants from getting ready for winter. Late frosts in the spring damage plants that think spring arrived a week or two earlier. A magnolia, for example, planted on the south side of a house enjoys the warmth and protection from



the house and may start to bloom and leaf out earlier than it would have if it was planted on the east side of the same house. This early growing time may actually kill the tree while it would have been just fine in another location.

Perennial plants are often damaged by soil heaving. Alternating freezing and thawing of the soil pushes shallow plant roots out of the soil, or breaks the roots off from the main plant. Chrysanthemums, delphiniums, and strawberries are susceptible to this type of winter injury. A layer of compost or bark helps prevent soil heaving.

Few plants in containers can survive winter without some winter protection. Some pots may crack or break if left outside for the winter, exposing plant roots to the air. Most plants in pots that die in the winter die from the lack of water, not from the cold. You need to remember that all roots need water year round and if mother nature does not provide it with snowfall you will have to water them occasionally. A pot in a sunny spot will need water more often than a pot in the shade. Sometimes the best way to protect plants in pots during the winter is to move the pots inside a shed, to set the pots in a shady place right next to the house, or to actually bury the entire pot in the garden for the winter.

Bark on some trees may split and crack on the south or west side of the trunk. This cracking is caused by the freezing and thawing cycles of winter. The tree gets sunburned much like an ice fisherman or a skier does. The tree cannot move into the shade so it freezes at night and sunburns during the day. Thin barked trees such as peaches, cherries, lindens, birch and maples are often damaged in this manner. Either paint the trunks white, to reflect the sun, or wrap the tree trunks with tree wrap in the winter.

Most winter injury is caused when the plant runs out of water during the winter. Broadleaf evergreens such as boxwood, holly, euonymus, and rhododendrons, continue to use, and lose, water through their leaves during the winter. If the ground is frozen and the plant's roots cannot replace this water loss, the leaves turn brown and die. Southern or western exposures and windy conditions aggravate this problem. A layer of mulch can help prevent this type of winter injury along with coating the leaves with an antidesiccant such as **Wilt Pruf**.

Occasionally the conditions are such that plants can actually die because the temperature gets too cold for that type of plant in our climate zone. In 1990 many euonymus plants, cherry trees, flowering plum trees, along with many other types of plants throughout the valley died because the temperature was -20 for an entire week. Although this type of frost damage does kill entire plants on occasion, the usual damage from extreme cold weather is the lack of flowers the next spring. For example, lilacs and forsythia may not bloom after a very cold winter because their flower buds are the first part of the plant that is killed in cold weather.

As you can see there are many aspects of winter plant care that should be addressed in your yard. The plants rely on you for the necessary water and winter protection to help them grow and bloom successfully.

Why do Leaves Change Color?

The process of leaves changing color and falling off a tree is an actual growth process. The plant uses energy to com-



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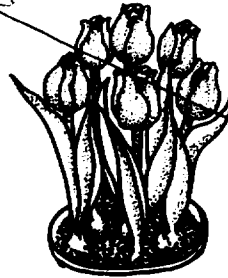
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plete this process. A healthy plant drops its leaves: a dead tree doesn't lose its leaves unless they are physically removed (wind, shaking). Leaves contain four type of pigments which influence their colors in both summer and fall.

* **Chlorophyll.** This pigment gives leaves their basic green color and is essential for photosynthesis: the chemical reaction that enables plants to use sunlight to manufacture sugars for food and to turn carbon dioxide into oxygen. Chlorophyll is the most dominant pigment and masks most other pigments.

* **Carotenoids.** This pigment produces yellow colors in plants. Orange colors are produced by a combination of both carotenoid and anthocyanins. Carotenoids produce the brilliant yellow leaves in birch, ginkgo and norway maple leaves. Corn, Carrots, Daffodils, and buttercups have carotenoids.

* **Tannins.** This pigment turns leaves brown. English oak, beech, and sycamore trees are trees that contain a large quantity of tannin. This pigment also turns yellow, orange, or red leaves brown after they drop to the ground.

* **Anthocyanins.** This pigment produces pink, red, and purple colors in leaves. Not all leaves contain this pigment and this pigment is more finicky. The amount of light and the acidity of the soil determines how much anthocyanins a plant will produce. The more sunlight, the redder the leaves will be. The more acid the soil, the redder the leaves, and the more alkaline the soil, the more purple. Red apples, concord grapes, blueberries, cherries, strawberries and plums contain anthocyanins. Anthocyanins produce the red leaves in red maples, burning bush, oak, and sumac.

During the growing season, leaves appear green because the plant is producing abundant quantities of chlorophyll. As the amount of daylight decreases in autumn, chlorophyll production slows down and then stops completely, enabling the carotenoids and anthocyanin pigments to appear. Moisture and



temperature can also influence how fast the color changes and how brilliant the change will be. The soil ph has a big impact on how bright the reds and purples will be in some plants. For example, a burning bush growing in a soil with a high pH will not always produce the brilliant red colors that the same plant would have produced in a different soil condition. Try mixing a cup of vinegar in 5 gallons of water and pouring the solution around your plants (not on your plants) once or twice in the summer to change the soil ph. It may help improve the fall colors in that plant.

Colors are their brightest when warm fall days are accompanied with very cool nights (below 45 degrees but above freezing). An early fall, with adequate moisture conditions, stimulates brilliant red and purple color changes. The yellow and brown colors will always be brilliant no matter what the weather is but the reds and purples will vary. Watch the mountains, some years the colors are brilliant, other years they are not so spectacular.

Pumpkins and Gourds

Pumpkins can be harvested whenever they have a deep, usually orange color and the rind is hard. Pumpkins should be harvested early if vines die prematurely. Harvest before heavy frost. Cut pumpkins from vines carefully, be sure to leave three to four inches of stem attached. Store pumpkins in a dry place between 50 to 55 degrees for several days before use.

In the same manner as pumpkins, handle gourds carefully. Bruises, scratches, and punctures can result in early deterioration. Gourds should have a hard rind before they are harvested. Gourds can be washed in a one quart water to a half cup bleach solution after harvest. Cure gourds in a 75 degree room until dry. After curing, gourds can be painted with shellac, or rubbed with a water base wax to help brighten the colors.



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Pumpkins and gourds without stems, not fully mature, injured, or subjected to heavy frost, do not store well. Pumpkins that are decorated and not carved will last longer.

Household Ants

While in South Africa I once left an open candy bar on top of my dresser. Within a few hours there was a trail of "BIG" ants going up my wall, across the ceiling and down the other wall into the floor with large pieces of my candy bar. Have you ever noticed a crumb from yesterday's sandwich sprouting legs and moving across the kitchen counter?



What was yesterday's crumb is now a feast for a army of ants. Ants usually take regular routes to and from their nest and their food by establishing a chemical scent trail. Instead of leaving bread crumbs to find their way back home, they leave a smell behind to find their way back to the bread crumbs.

Ants can be common pests in homes. Damage from ants varies. Most ants are primarily just a nuisance; they cause little damage. However, carpenter ants can weaken wooden structures. Unlike termites, ants nest in wood but they do not eat the wood.

Ants have a wide range of nesting habits and food preferences. Some ants build nests in soil producing characteristic mounds while other ants nest in homes behind moldings, baseboards, countertops and similar places. Still others, like carpenter ants, nest in decaying wood.

Not all ants found outdoors become pests indoors. Out-

doors, ants are important in aerating the soil and in seed dispersal of many wildflowers. Outdoor ant colonies generally do not require control.

Inside, ants become a nuisance. They like to eat sweets, fats, starches, grains, and other foods including meat. That's why they hang out in the kitchen. They may nest either inside or outside. They can nest in walls, under floors and even in potted plants. Most indoor ants do not cause any structural damage to buildings.

Spraying a pesticide on the occasional ant foraging for food is only a temporary fix. However spraying ant crawl ways, tunnels, and the ant hill may help eliminate the problem. Both Diazinon and Permethrin pesticides provide a safe chemical control for ants if used correctly. Two other excellent indoor sprays are **Bioganic Crawling Insect Killer** and **Concern Citrus Home Pest Control**. These are not chemicals and they do not leave a chemical residue. In fact, **Bioganic Crawling Insect Killer** has a strong clove smell that is quite pleasant and **Concern Citrus Home Pest Control** has a pleasant citrus odor.



Ant traps and baits can also be effective. Put the traps under the sink, in the food closets, or behind the drawers in your kitchen. **Enforcer** makes an excellent ant trap that attracts ants and then sends the poison back to the ant hill with the soldiers. Do not set baits where small children or pets can reach them. A mixture of boric acid and honey or syrup is also an attractive bait.

