



J&L Garden Center

The All Season Gift
and Garden Center

620 North 500 West Bountiful, Utah 292-0421

The Gardening Newsletter

vol 16 issue 1

March 2003

March Gardening

We at J&L are excited about the coming new year for many reasons that we will talk about in this newsletter. We are also a little nervous about the coming year for one big reason. "Is there going to be enough water?" We think the answer is "Yes" and "No". We think there will be plenty of water for us to grow a garden if we are conservative with our use of water. We do not think there is enough water to waste it as we have done in the past; we are going to have to change our watering procedures and schedules. We may not be able to have a beautiful, green lawn all summer but we should be able to have a beautiful, green garden all summer, and we definitely can have beautiful, green shrubs and trees all summer long.



There is way too much information on water and water conservation to put in this newsletter. So, we have put together a collection of pertinent handouts with many extension service articles, water conservation district information, other water expert's opinions, a few Websites, and some of our own handouts. We don't know how many pages this collection will eventually become, but we will have it available for purchase by the time this newsletter is sent.

Change In Ownership

We would like to announce that John S. Smith the owner and president of J&L Garden Center has 'semi-retired'. John and his brother Lloyd began J&L Garden Center in the spring of 1958. John and three brothers (Lloyd, Albert, Robert), along with their wives and most of their children, have successfully operated J&L Garden Center since that time. J&L was first located at 266 West Porter Lane in Centerville (the office building of Porter Lane Nursery that will be torn down this coming spring as a new housing development takes its place. John and his brothers moved J&L Garden Center to Bountiful in 1973 to the Greenhagen Nursery location (our present location).

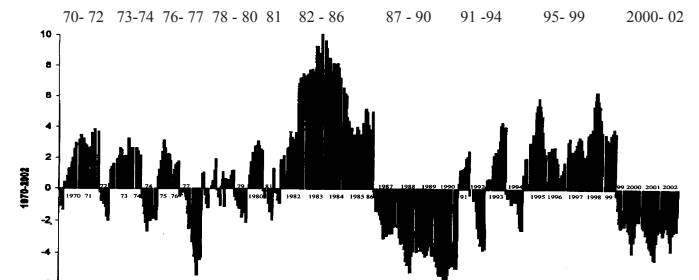


During these past 30 years J&L has been a family business, providing work for all of the John, Lloyd, Albert, and Robert Smith families who have wanted to work in the gardening business. During this time most of these family members have moved into other fields of interest and on to other careers. Through the years, John bought the business from his brothers and this year, John sold his business to two sons and a daughter; Gary B. Smith, Gordon J. Smith, and Sharon F. Anderson. John will continue to work at J&L on just a part-time basis, but, always as a full-time consultant to his children.

The three of us plan to continue operating this business with the same degree of professional service that J&L has been known for since 1958. Gary will continue to operate the retail garden center and nursery. Gordon will continue to operate the landscape portion of the business and Sharon will continue help keep the records of the business and make sure that Uncle Sam is taken care of properly. Please stop by with all of your gardening questions, problems, and for all of your gardening needs, we will be here to serve you.

Water Cycles

As I was looking for articles for this spring's gardening newsletter I noticed we were worried about whether we would have enough water in 1990 and 1991. We also had a major water concern in 1981 and 1982. Then I came across a graph from the extension service that shows the water cycles for the past 30 years. This chart is very interesting: the ups and downs of Mother Nature. It looks like we are now in the fifth year of a five year cycle; but who knows? Nobody can really outguess Mother Nature, but we can try to outwit her!



Graph furnished by the Utah Climate Center at USU.

I also found an article written by Larry Rupp, an Ornamental Horticulturist at USU, written in 1992 entitled '**Living with Landscape Irrigation Restrictions**'. Larry is now the Department Head of Plant Sciences at USU. His article indicates that we seem to have the same concerns over and over again. This extension bulletin is very well written and addresses many of the issues we will be dealing with this year. If you would like a copy of this article please stop by, we have made copies of it as well as many other helpful water conservation handouts. I wish there was an easy solution to our water situation but there is not. Water conservation and correct irrigation procedures are the only ways to over come the current water shortage.

E-mail

We keep telling ourselves that it is time to go on-line, but we keep procrastinating. This is the year that we have set a goal to start our own web site and start advertising with a local E-Mail company. This company



continued on page 2

continued from page 1

has promised that they do not just *spam* advertisements to everyone. They require a person to actually sign up for our E-mail advertisements, and, they can then decide whether or not they want to receive advertisements from other local businesses in Davis County by E-mail. This is a local advertising agency and they are not going to send national junk mail as unwanted E-mail - something that I am constantly trying to get rid of on my home computer.



If you would like to receive our newsletter via E-mail, and receive a few other flyers or advertisements that we will send out during the coming year please fill out your E-mail address on the front of this newsletter and return it when you pick up your free box of fertilizer with your coupon. You may also register for the E-mail version of the J&L Gardening Newsletter at www.JLGardenCenter.com.

We will not be selling plants or other garden products online, but we hope to have our newsletters and fliers available on the website. We are also hoping to have all of our newsletters and fliers on a CD for sale this year.

New Products

We have a few new gardening products to introduce this year. **Mosquito Barrier** is a garlic repellent spray that is supposed to repel mosquitoes, and many flying insects, up to 2 weeks. We also have a new repellent to add to the line of predator urines we have been selling for the past three years. **The Leg Up Company** now offers **Mountain Lion Urine** to help repel deer, raccoons, and other unwanted friends in your yard. In addition to the lion urine we also have wolf urine and bobcat urine available in quart bottles, not just in the small 8 oz. size.



The next item is not new, in fact it is probably 30 years old - we just have not been able to find it to sell for the past ten years. We now have coils of **aluminum lawn edging**. We have both 4" wide and 6" wide lawn edging. We made a special purchase of 1,200 rolls of this lawn edging and will have it for sale - and on special - until our supply runs out.



We found a line of indoor Bamboo curtains. These indoor curtains are great to divide one room from another without having to close a door. They are good quality and look nice. We also have a line of outdoor bamboo fences, furniture and screens on order; we hope they will actually arrive before the newsletter, but we are not positive.

Last year, our supplier of PVC arbors and trellises went bankrupt so we were not able to find any. This year a different company bought the old molds and they are producing the same high quality PVC arbors and trellises we had 2 years ago. In addition to the arbors and trellises we will have several new styles of garden arbors, gazebos, wrought iron furniture, cement benches, and patio furniture. Many of these patio items and furniture are in stock now, ready for purchase.



New Rose Varieties

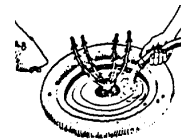
We have all the new AARS winning roses along with several new roses from both **Jackson & Perkins** and **Weeks Rose Nursery**. The 2003 All American Rose Winners are:

- Cherry Parfait** - White-red Grandiflora
- Eureka** - Yellow Floribunda
- Hot Cocoa** - Red-orange Floribunda
- Whisper** - Yellow-white Hybrid Tea



Rose Care

Roses are actually good, drought resistant plants that grow well with minimal water, once they are established. Roses can grow and bloom well if they are watered just once a week, sometimes even just twice a month, in cool weather. Many gardeners seem to think roses need to be watered every day, but, train your roses early this year and they will bloom just fine all summer with just a minimal amount of water.



How do you train them? Do not start watering them on April 15 at 9am, when the water is first turned on. Wait until the ground starts to dry out three or four inches deep before you start watering them. Buy a **Moisture Meter** and check the soil moisture content on a regular basis, watering them only when the soil dries out. Put a 1/2 inch layer of **Soil Pep** or **Shredded Bark** around each plant to also cut back on the frequency that you need to water them.

Start pruning your roses as soon as they start to grow in the spring; usually mid-April. Continue trimming and shaping your roses all summer, to keep them blooming their best. Fertilize your roses **J&L Rose & Flower Fertilizer with Systemic Insecticide** as soon as you prune them and repeat every two months until August 15. This fertilizer will help your roses grow and bloom vigorously while keeping the pesky aphids and thrips under control. Spread one-third cup of **Magnesium Sulphate** (Epsom Salts) around each rose bush when you prune them and spread another third cup of epsom salts around each rose again about mid-July. Your roses will look beautiful all summer. Magnesium Sulphate is also great to use in all the flower and vegetable gardens. Put some Magnesium Sulphate around your petunias and marigolds and you'll see a big difference.



Dormant Spray ... It's Important

Dormant spray is the single most important spray of the year; because it prevents and kills more insects than any other spray during the year. **Dormant Spray** means spraying your plants with an insecticide before the plants begin to grow; while they are still dormant. **Dormant spray** is usually a mixture of plant oil (not motor oil) with another insecticide such as **Diazinon, Isotox, or Lime Sulfur**. All plants benefit from **Dormant Spray**, especially fruit trees, raspberries, roses and evergreens. Sometimes the only way to kill a specific insect (pear psylla, juniper scale, spider mites) is with your dormant spray.



Wait to apply **Dormant Spray** until the buds of your plants begin to swell, but be sure to spray before the buds completely open (usually early April). Thoroughly spray the upper trunk and branches. Do not spray the lower trunk because beneficial insects lay their eggs in this location.

Unfortunately, dormant spray does not kill all insects. You will have to spray later in the year as needed. For example,

continued from page 2

dormant spray will not kill the worms in apples, worms in cherries, peach tree borer, aspen borer, or root weevil. These insects live inside the tree or in the soil during the winter. Dormant spray only kills those insects it comes in contact with. We have an information sheet about using dormant spray. This sheet will further explain how to use this important spray. Please stop by and pick one up.



Fruit Tree Care

Besides pruning and dormant spraying your fruit trees, fertilizing them should be a high priority each spring. Fruit trees must be fertilized early each spring if they are to produce high quality fruit each year. Fruit trees need more fertilizer than shade trees and pine trees, and must be fertilized at least six weeks before they bloom for the best results. Do not fertilize fruit trees after June or your trees may produce undesired growth too late in the year. Young trees (up to 5 years old) benefit from the use of **Miracle Gro Tree Stakes**. Older trees (more than 5 years old) benefit more from a good garden fertilizer such as **16-16-8 Multi-Purpose Fertilizer** than from tree stakes. We also have a 3 lb. box of **Turfmagic Tree and Shrub Fertilizer** that is great for fruit trees. Use your coupon and pick up a few boxes of this fertilizer for your fruit trees, it is also cheaper than using stakes.

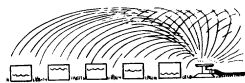


Too much fertilizer is just as bad for trees as not enough so stop by and pick up a **Fertilizing Fruit Tree** handout to help you decide how much fertilizer your trees really need. The handout is free, just ask for a copy. Do not start watering your fruit trees, especially if they are in the lawn area, until the soil starts to dry out about six to twelve inches deep. The roots of most trees are at least that deep and can absorb the winter soil moisture until May or June without any extra water needed. Trees in lawn areas get plenty of excess lawn water and do not need additional water until about late-June or July, when the soil moisture has finally been depleted six to twelve inches deep. **During the summer water your trees once a month**, in addition to any lawn water they may receive. When you water trees try to get the water to soak in twelve to twenty-four inches deep all around the dripline, not right next to the trunk. Poke some holes twelve inches deep at regular intervals and let the water run for several minutes in each hole.



Lawn Care

Now is the time to start thinking about your lawn. Lawns will be the hardest hit during water restrictions. Kentucky bluegrass requires a consistent, not a constant supply of water to stay green. However, if water is in short supply you can still keep your lawn alive even if it is not the pretty green lawn you are used to. You may have to endure a 'less than perfect lawn' during the heat of summer and then 'revive your lawn' this coming fall or winter. We have a handout prepared in our **Water Conservation Handout Collection** to help advise you, in detail, how to save and conserve water in lawns. Please stop by and pick up one of these handout collections.



Don't fertilize too early in the spring. Wait until the soil begins to warm before applying your first application of fertilizer. Normally we suggest that you fertilize your lawn four times each year. However, this year you may only want to fertilize your lawn two or three times. Do not apply fertilizer when a consistent supply of water is not available. In other words you may want to skip any lawn fertilizer from late-June through Mid-September.



The four fertilizer steps we normally recommend are:

1. **Crabgrass Preventer** - mid-April
2. **21-7-7 Lawn Food** - June
3. **Weed & Feed** - late-August
4. **Fall & Winter Fertilizer** - October

This year you may need to skip steps 2 and 3 if water is not available. A healthy lawn is more resistant to diseases, crowds out unwanted weeds, overcomes insect damage faster, and withstands drought better so do not just stop fertilizing all together, just fertilize more conservatively.

Pansies and Primroses

Pansies and primroses are great flowers. They bloom early each spring, letting us know that spring is just around the corner. Pansies and primroses love cool areas so they grow great in gardens used for begonias and impatiens. Pansies will bloom repeatedly from early spring until the temperature gets hot during the summer. Some gardeners have pansies bloom all summer. Primroses will grow and bloom for at least a month or two. You can extend their blooming time if you will take time to remove the old flowers as soon as they start to fade. A new set of flowers may begin to grow if you remove the old blossoms. Remember, pansies and primroses love cool areas, they do not like the hot, sunny areas. We have them both now - ready for planting in your yards.



Pruning Trees

When to prune trees depends to a large extent on why you are pruning. A simple rule of thumb is:



Winter: Pruning during winter dormancy helps the tree produce a vigorous burst of new growth in the spring. The tree's framework is easy to see and major faults can be easily detected and repaired.

Summer: Pruning after the burst of new growth helps to slow down or dwarf a tree. You can control the suckers and branches you don't want, without stimulating new branches to take their place. You can also reduce the number of leaves on the tree, which will also help slow down the tree's growth.

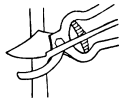
Fall: Fall pruning helps to prevent damage from heavy snowfalls. Fall pruning also helps eliminate unwanted insect and disease problems. Fall pruning, however, should be kept to a minimum so as not to stimulate any new growth late in the year that would be prone to winter injury.

Spring Flowering Trees: If your main goal, for a flowering tree, is to have as many flowers as possible, be sure to wait until after it is finished blooming to prune it.

Pruning trees is an art, not a science. Even though there are correct principles and steps in pruning, there is not one best way to prune a tree or shrub. Unfortunately, trial and error is

continued from page 3

usually the best teacher. Pruning is one of the most important tasks a gardener must do. Many gardeners are reluctant to prune because they aren't sure how to prune or they are afraid of making a mistake and injuring their plants. Plants are usually very forgiving and will usually recover from incorrect pruning (the plants may take a few years but they usually recover).



Perhaps the most important step in pruning is learning how and just starting to do it. If you follow a few simple guidelines you will do fine and your trees will look great.

1. Start pruning the tree while it is still young. The cuts will be small and the tree will grow the way you want it, right from the beginning.
2. Start with a visual inspection of the tree. Start at the top and work to the bottom. Remove defective parts before you prune to shape the tree.
3. After removing defective parts trim and shape your tree according to the type of tree it is. Knowing what shape and what size your tree should grow is helpful in determining how much to prune.
4. Make clean cuts: keep your tools sharp.
5. **Do not leave a stub** or cut too close to the trunk of the tree. This is the most important part of pruning.
6. No pruning can be just as bad for a plant as incorrect pruning.
7. Light pruning and the removal of bad branches should be done **"now"**: whatever time of the year it happens to be.
8. Attend a pruning class or buy a good pruning book.

Flowering Shrub Shape Up

To keep flowering shrubs looking their best you need to prune them. The best time to prune summer-flowering shrubs (potentilla, spiraea, weigela, roses) is in winter or early-spring, while they are still dormant. The best time to prune spring-flowering shrubs (lilac, forsythia, snowball, wisteria, quince, etc.) is after they finish blooming in the early-summer.



Flowering shrubs that bloom on new wood can be pruned more severely than flowering shrubs that bloom on old wood. Forsythias, potentillas, spiraeas, privets, weigelas, and viburnums bloom on new wood and are easy to train and prune. Lilacs, climbing roses, wisteria vines, and rhododendrons bloom on older wood, be a little conservative when you prune these types of plants.

You will increase flowering wood and make more compact shrubs by pruning them every year or two. If you want to grow a large plant don't cut it back as much, or prune it as often as the other shrubs you are trying to keep small. Let the large plants grow a little taller each year, but don't let them just grow tall - uncontrollably fast.

The easiest method of pruning many flowering shrubs, and my favorite, is to cut all the stems down to within a foot or two of the ground. You can cut the stems longer or shorter as needed, depending on the type of plant you are pruning. Don't worry about where you make each individual cut like you do on trees. You may even want to remove some of the larger branches completely to the ground, leaving some of the smaller branches to grow back. New growth will emerge all along the cut stems, the plant will quickly rejuvenate, and the plant will start bloom-

ing by early-summer. Some spiraeas and potentillas will grow 18" to 24" each year after being trimmed this severely.

Many varieties of summer-flowering shrubs respond well to this type of pruning: Prune Early; Prune Severely; Prune Often.

Pruning Japanese Maples

This is a plant that does not require much pruning. Try to prune the younger growth, not the older branches. Pruning the older, larger branches will not stimulate new growth from those points and your tree may start to look 'different'. Prune Japanese maples from December to March. Light summer pruning can also be done from June to August. Try not to prune in September or October; pruning in the late-fall may stimulate tender new growth that may be injured during the winter.



Garden Peas

What can taste better than peas fresh from the garden? Peas are one of the first vegetables to ripen in your garden and they are one of the first rewards of the year for your efforts. Pea plants love the cool spring weather and should be planted as early in the spring as possible. Plant peas as soon as the soil dries out enough that you can cultivate it. If you plan ahead you can roto till your gardens in the fall so you don't have to wait so long in the spring to plant your peas. If you haven't planted your peas yet, plant them as soon as possible.



When you plant pea seeds early, or any other seeds, be sure to dust them with a fungicide because the soil is still pretty cold and damp. Seeds planted in a cold and wet soil may rot before they have a chance to germinate. You can also help your pea plants to be more productive by soaking the seeds in **Garden Inoculant** before you plant them. Garden Inoculant is a natural nitrogen-fixing bacteria that helps the pea plants absorb nitrogen from the air and put it into the soil. Garden Inoculant also works great with bean seeds.

Some of the best pea varieties are:

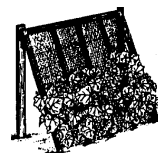
Little Marvel, Green Arrow, Lincoln, Early Frosty, Mr. Big, Sugar Sprint, Oregon Sugar Pod.

Peas love warm companions. Why not grow two crops in the space of one and provide extra benefits for both? Plant peas and a warm-season crop together and reap the benefits from an extra harvest: Peas and tomatoes work well together.



Plant peas in a ring around the outside of tomato cages in early-spring. The peas will climb the wire. Transplant tomatoes into the cages as the weather allows. The peas will protect tomatoes from cool weather. The peas will fade away and leave behind an extra boost of nitrogen for the hungry tomatoes.

You can also train peas up a wooden A-frame, covered with a net. Interplant cucumbers between the peas when the weather warms. As the peas fade away, the cucumbers will be filling in the space, reaping the benefits of the nitrogen left by the peas. Other veggies to plant at the same time you plant peas are: spinach, radishes, onions, parsnips, carrots, and lettuce. Stop by and pick up a seed planting guide for additional help planning your gardens.



Top Mulches

Top mulches have several important roles in the garden. They are even more important now, for use in low-water growing conditions. Some of the most common **Top-Mulches** include Bark Chips, Shredded Bark, Soil Pep, Coconut Fiber, Grass Clippings, Newspaper, Weed Cloth, and Plastic sheeting. The key benefits are:



1. Retains soil moisture by reducing the amount of evaporation from the soil surface.
2. Protects the plants roots from heat, cold, drought.
3. Keeps the soil cooler.
4. Prevents germination of unwanted weeds.
5. Helps prevent erosion from wind, rain, sprinklers.
6. Adds a decorative top cover to a garden.

One two-cubic bag of Top-Mulch will cover:

96 square feet - 1/4 inch deep	12' x 8'
48 square feet - 1/2 inch deep	12' x 4'
24 square feet - 1 inch deep	6' x 4'
12 square feet - 2 inches deep	6' x 2'
6 square feet - 4 inches deep	3' x 2'

Coconut Fiber

Coconut Fiber is just what its name implies, shredded coconut husks. The coconut plantations have found a solution to their biggest problem, how to get rid of the unwanted coconut shells. They grind the shells into fibers, compress them into bales, and then package them for a variety of uses. Coconut fibers have a unique ability to absorb a large amount of water quickly and then slowly release the water over a long period of time. Coconut fiber is quite fibrous and takes several years to decompose; maintaining a spongy texture during this time.



Coconut fiber has many uses in the garden. It can be used in hanging baskets and in containers on the patio. It can be mixed into the garden to help loosen clay soil and to help maintain water in sandy soil. Coconut fiber can be used for almost any planting situation in the yard.

Coconut fiber is a little more expensive than peat moss but it lasts much longer in the soil, making it an excellent substitute for peatmoss. Coconut fiber has a pH of 5.0 to 5.8; perfect to help lower the pH of the surrounding soil.

Coconut fiber is very compressed (9 to 1). A 1.5 lb block will make about 9 quarts of mulch. A 10 lb block will make a wheelbarrow full (3.5 cubic feet) of mulch. Mix 1 part coconut fiber with 4 parts potting soil in containers. You can also rototill 1" of coconut fiber in the garden, or apply 1/2" of coconut fiber on top of the soil to help retain moisture.

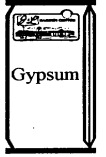
Clay Soil Conditioner

Many garden soils lack the necessary structure to hold and move air and water for maximum plant growth, especially clay soils. Most clay soils need additives that will hold water (like peatmoss) but that will allow water to drain (like sand). Adding peatmoss and sand to clay soils may just add to the problem rather than correct the problem; unless they are added in the proper amounts. Clay and sand mixed together may produce bricks. If you add sand you must add "a lot of sand" to improve the



soil. Peatmoss mixed with clay may produce a soil that stays too wet. The best way to fix a clay soil is to add manure, compost, soil pep, or perlite to the garden rather than peatmoss or sand.

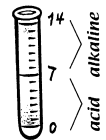
Gypsum is another soil conditioner that helps improve clay soil. **Gypsum** helps improve the chemical structure of clay soils; it does not improve the physical structure very quickly. Gypsum helps improve all soils, not just clay soils. Gypsum adds calcium and sulphur to the soil which allows plants to absorb and utilize fertilizers that are already in the soil.



Another additive available to help improve clay soil is "**Utelite, Clay Soil Conditioner**". Utelite is a porous, rock chip which acts as a permanent reservoir for both air and water. Utelite increases the water holding capacity of the soil and also helps improve drainage within the soil. For more information about improving your garden soil please ask for our "Garden Soil and Mulch" handout.

Soil pH

Soil pH is the measurement of how acidic or alkaline the soil is. The pH scale runs from 0 to 14. Numbers from 0 to 7 are acid, and from 7 to 14 are alkaline; 7 is considered neutral.



For Gardeners, soil pH is the number that really counts. Soil pH affects nutrient availability and microbial activity. Most plants grow best at a slightly acid to neutral pH (6.5 to 7) although certain plants have adapted to extreme pH environments both directions. The soils in our area usually have a pH of 7.5 to 8.5. This means you need to make the soil more acid so that plants can absorb nutrients and grow properly. The further west you live in West Bountiful and Woods Cross the higher the soil pH will be. Some areas close to the Great Salt Lake, and in the areas that are totally clay soils, have such a high pH that plants will just not grow no matter what you try. You may have to bring in a lot of brand new soil from another location before your plants will grow.

To lower the pH of an alkaline soil, add manure, compost, sulfur, or gypsum. To raise the pH of an acid soil, add gypsum or lime. However, these measures are only temporary and cannot entirely counteract all the soil conditions in your yard. They need to be repeated every year, or even several times each year. You may have noticed that we suggested gypsum both to raise and to lower the soil pH. Gypsum is a material that helps to bring the soil pH to about 7, thus, helping to raise an acid soil pH and to help lower an alkaline soil pH.

We have an excellent handout about Garden Soils that goes into more details about the soil pH. Please stop by for a free copy of this handout. This year we were able to make a special purchase of several hundred soil test kits and pH meters. These kits and meters are usually very expensive but we will have these kits on sale while our supply lasts.



Solarizing the soil

Healthy soil is the key to a productive garden. Adding organic matter, such as compost, and checking nutrient levels with a soil test will help. But how do you get rid of disease organ-



continued from page 5



isms, insect eggs, larvae, and weed seeds?

Soil solarization is one technique of controlling these problems without the use of chemicals. Soil Solarization uses sheets of clear plastic, moisture, and the sun. Cover the moist soil with plastic and it acts like a greenhouse. The temperature rises and gradually pasteurizes the soil; it does not sterilize the soil. The soil is heated to a temperature hot enough to kill harmful soil organisms but does not kill everything in the soil. You can plant directly in the soil, once the plastic is removed. Soil solarization only pasteurizes the soil four to eight inches deep so be careful not to roto-till too deep or you may bring unwanted seeds and diseases back to the surface.

Unfortunately the time to start this project is when the weather is sunny and hot - 80 degrees or more. Most gardeners want to have their gardens planted and growing by the time the weather gets that hot, which makes soil solarization a little more difficult to use. For more information about soil solarization stop by and pick up an informative handout about **Soil Solarization**.

Weed Preventers for the Garden

Besides cultivating the soil and pulling the weeds there are easier ways to keep weeds out of gardens. Many chemical weed preventers are available that are safe to use in both the vegetable and flower gardens. **Treflan**® is one of the most common weed preventing chemicals because it can be safely used around vegetable plants and in flower gardens. Treflan only kills seeds as they germinate so it will not harm young seedlings. Treflan will not control roots growing from perennial grasses or from plants that have already germinated. The best time to apply treflan is after all your plants are planted and growing for at least a week. Remove any existing weeds, apply treflan and enjoy your garden for the rest of the summer. **Treflan is also sold as Miracle Gro Prevent**®.



Casoron® is another popular weed preventing chemical because it is much stronger and prevents more weeds than most other weed preventers. Casoron is great to use around shrubs, trees, and along fence lines. Casoron prevents weeds up to nine months and is much safer to use than the soil sterilizers because it will not kill existing plants. Casoron cannot be used in the vegetable or flower gardens, but it is recommended to control weeds and grasses in shrub areas. Casoron can also be used in the raspberry patch and in the rose garden. Stop by to learn more about these labor-saving, weed preventing chemicals. We have a handout available about many of the weed preventing chemicals.



Cutworm, Slug & Snail Collars

If you would like to try a different way to prevent damage from slugs, snails and cutworms you might want to try using a **Slug Collar** around your plants. Cut aluminum window screen into 4" x 10" long pieces. Leave sharp ends rather than smooth cuts because even if the slugs would crawl up the screen they will not crawl over the cut-wire ends. Roll the pieces tightly so they hold their shape then put a collar around each of your plants. Bury the bottom edge to hold them in place. This



should keep the pesky slugs, snails, and even cutworms away from your new seedlings. You may not need to start using snail and slug baits until later in the summer if you can keep these pests away from your young and tender plants.

Changing Pesticides

Many of you know there is constant change in the chemical industry. It is hard for us to keep ahead of all the changes so I am sure it is even harder for home gardeners to understand all of the changes. Listed below are a few of the changes that will affect home gardeners this year.

Dursban - This product is no longer available for purchase by homeowners. Homeowners can continue to use this chemical until it is gone. The best way to dispose of old, unwanted chemicals is to use them up, according to their label recommendations. This is better than just dumping them out or sending them to the landfill.

Diazinon - This insecticide is still one of the most broad spectrum insecticide for lawns and gardens. It is scheduled to be discontinued for production in 2003 and then it will become unavailable as the supplies run out.



Spinosad - This is an insecticide in a new class of insect controls; the Naturalytes. Spinosad is derived from a naturally occurring bacteria, *Saccharopolysopra spinosa*. Spinosad is very effective controlling many butterflies, flies, wasps, and beetles. This insecticide does not harm many of the beneficial insects such as lady bugs and lacewings. It is however, harmful to honeybees and bumblebees when it is first sprayed. Once it has dried spinosad doesn't seem to bother the foraging honeybees to a great extent. Spinosad is not harmful to mammals, reptiles or fish. This product is labeled to control borers and many insects on fruit trees, vegetables and ornamental flowers. Spinosad is the main ingredient in **Fertilome Borer, Bagworm, Leafminer & Tent Caterpillar Spray** (that is a long name for a bottle of insecticide!) We have a more extensive handout explaining this new product, please stop by and ask for a copy.

Neem Oil - This is not a new pesticide; we have been selling it for several years. It is bottled by the Greenlight company and sold as **Rose Defense, Fruit Nut & Vegetable Spray, and Powdery Mildew Killer**. Neem oil is an organic oil derived from the Neem Tree, grown in Australia. Neem oil smothers and kills many insects and diseases without having a toxic impact on humans. It is safe to use within a few days of harvest on most vegetables and fruits. We have a more extensive handout explaining Neem Oil, please stop by and ask for a copy.



Eight - This is an organic insecticide that has many of the safer properties of the inorganic insecticide named **Sevin**. **Eight** contains *permethrin*. It is labeled for use on fruits, vegetables, flowers, shrubs and trees. Eight controls most insects both good and bad. Eight does not have a long residual, making it a good choice for controlling most insects in the vegetable garden, especially close to harvest. Eight is a poison even though it is classified as an organic insecticide and must be treated accordingly. **Eight** is a good alternative to **Diazinon** and **Malathion**. Eight does



continued from page 6

not last as long as diazinon so it must be re-applied more frequently.

Permethrin is also the main ingredient of **Greenlight Borer Killer**. This is the product we are recommending this year to control peach tree borer, as the replacement for Dursban. **Greenlight Borer Killer** is also labeled for use on vegetables, fruits, flowers and shrubs, making it a versatile spray for home use.

Stay Alert

Good gardeners never forget that pesticides designed to kill insects can be dangerous for people, as well. That's why it's so important to select garden chemicals carefully, apply them sparingly, and always read and follow all instructions to the letter. Even "safe" organic pesticides can be fatal to humans if improperly used.



What to Spray?

When facing an insect infestation, some gardeners grab the nearest spray. But wait! Be sure you know which pest you're dealing with and that the product you plan to use is effective on that particular pest. Also check to make sure the product is safe for your particular plant. For example, insecticidal soaps are very safe to use but they may not get rid of some insects such as fungus gnats. Insecticidal soaps even though they are very safe may still damage delicate plants, such as African Violets.

Borer Killer Update

The common borer killer, **Dursban** has been taken off the market. You can still use this chemical until it is gone but we do not have it for sale. We have two insecticides that have been registered for borer controls. **Greenlight Borer Killer** containing **permethrin** and **Fertilome Borer, Bagworm, Leaf-miner, & Tent Caterpillar Spray** containing **spinosad** are now available to control borers. These products are organic insecticides: you have to apply them more frequently than dursban. **Orthene** is also available to control borers in pine trees, birch trees, ash trees, and other ornamental trees, it cannot be used on fruit trees.



Rain Water

Have you ever noticed how plants appear greener and brighter after a good rainstorm? Its not just because the dust and dirt got washed off. Rainwater is a clear, salt-free source of water that contains many beneficial ingredients for plants. Rain can contain sulfur, potash, several other minerals and even micro-organisms, all of which provide a boost to plants growth. During summer thundershowers there can even be an added bonus when lightening converts atmospheric nitrogen into a nitrogen solution for plants to absorb and use - like spraying them with a dose of **Schultz All Purpose Plant Fertilizer**.

Excessive Water

Wilting leaves are not always the sign of the lack of water. The lack of healthy hair (feeder) roots (sometimes caused by root rot - too much water) also hinders the plant's abil-

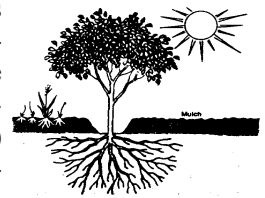


ity to absorb water. A simple test to determine the cause of the problem is to completely soak a wilting plant. If the plant recovers fairly quickly and the leaves regain their normal appearance, it is very likely that the plant was dry. However, if the plant remains wilted, or if it takes a long time to recover, it is very likely that the plant is suffering the effects of too much water.

The biggest problem with root rot is that by the time you know you have a problem it is sometimes too late to save the plant. The best hope for the affected plant is to cut back on the water as much as the plant can tolerate. Do not just cut back on water completely, remember the plant does not have as many hair roots as it should. Stimulate the plant to start growing roots a little faster by fertilizing the plant with a liquid root starter fertilizer. Mix **Root Starter** 1/4 strength with the water each time you water. Also, you can spray the root starter fertilizer on the plant's leaves once or twice a month until the plant either dies or it starts to recover.

Drought Resistance

The drought resistance in plants is the capacity of each plant to withstand periods of dryness. Plants achieve this in a number of ways: (1) improving their water uptake from the soil, (2) reducing their loss of water, and (3) increasing their ability to store water.



Water from the soil enters the plant through the tiny root hairs at the end of the roots. Some drought-resistant plants have extensive root systems with a large active surface area. Some plants are capable of rapid growth into the deeper subsoil strata where moisture may be available. The seedlings of some trees and shrubs, adapted to drier areas, may have tap roots many times longer than the plant itself, which enables them to obtain the necessary subsoil moisture. Some native grasses are very deep rooted while others have shallow, fibrous roots systems, which simply act as a sponge, immediately absorbing any rainfall which might fall on the soil surface.

Some drought resistant plants are able to reduce their water loss by closing their stomates, the cells in leaves that open and close to allow air exchange. Some plants have small leaves or have thick leaves, which also reduces water loss. Many of the drought resistant plants have a blue-gray or a gray leaf color, which also plays a major role in conserving water.

Cactus and other succulents have the ability to absorb water and store it until the plant needs to use it.

A few common drought resistant plants are listed below. We have a more complete list in our **Water Conservation Handout Collection**. Please stop by and pick up a copy of this informative handout collection.

- | | | |
|--------------------|----------------|------------------|
| Scrub Oak | Chokecherry | Golden Rain Tree |
| Amur Maple | Junipers | Pine & Spruce |
| Honeylocust | Ginkgo | Sycamore |
| Sumac | Potentilla | Wild Roses |
| Lilacs | Serviceberry | Rabbit Brush |
| Silvermound | Sedum | Snow In Summer |
| Yarrow | Blanket Flower | Blackeyed Susan |
| Penstemons | Yucca | Sagebrush |
| Ornamental Grasses | Daffodils | Honeysuckle vine |

Drip Irrigation

A few years ago we quit selling drip irrigation supplies because it is hard to filter irrigation water clean enough to prevent the nozzles from clogging. This is still a major problem of drip irrigation and its biggest disadvantage in our area. However, if we are restricted in how much water we are allowed to use (not by the time we are permitted to water), or, if we must use culinary water instead of irrigation water this is an excellent way to water many shrubs, flowers, and possibly even young trees. We are now stocking a few drip irrigation kits for pots and planters and we also have a few of the basic supplies for installing a drip irrigation system in your gardens. These supplies include: Timers & automatic valves, 150 mesh filters, pressure reducing regulators, main tubing, distribution tubing, emitters and many fittings needed to install your own system.

You have to remember that drip irrigation supplies are dispensing water in gallons per hour instead of gallons per minute that most sprinkler heads apply. **Example:** A typical full circle sprinkler head emits about 3 gallons of water per minute which is 180 gallons of water in one hour. A sprinkler on the end of your hose emits about 4 to 8 gallons of water per minute (240 to 480 gallons in one hour). A typical drip irrigation head emits about 1 or 2 gallons of water in one hour. You have to plan your system carefully and do a lot of experimenting. Unfortunately drip irrigation is a matter of trial and error.



Xeriscape not Zero Scape

The concept of xeriscape often brings the thought of "Zero Scape" - Cacti, Rocks, Sagebrush, no lawns, bare landscape. **NOT SO.** A few '**water wise**' plants of interest that are commonly used in home landscaping are: roses, daffodils, lilacs, forsythia, ornamental grasses, and iris.



Xeriscape can use many of the same plants you normally find in landscape plans if you group them properly and water them according to their needs, not your own time schedule. If you follow a few simple principles you can have a very water efficient yard this year.

1. Analyze your soil. Change it according to its needs.
2. **Plan It** before you **Plant It**. Take in consideration areas of shade, reflected heat, low areas that may collect water, sloped areas that may not absorb water, and surrounding trees.
3. Use appropriate plants.
4. Use grass wisely. You may consider using *less-lawn* rather than *lawn-less* landscaping. If you only walk on your lawn to mow it, you may have more lawn than you need.
5. **Water Wisely**. Group plants together that have similar water requirements. Use the same type of heads on each valve, don't just mix and match. Separate valves to water different areas on individual schedules, do not just water everything every time you water.
6. Mulch your gardens to help reduce water loss.
7. Keep it up. Proper maintenance is important in a working Xeriscape.

We have a few other handouts and more information about Xeriscaping in a collection of **Water Conserving Handouts**. Please stop by for a copy of this handout collection.

Tips For a Water Wise Garden

Water is a critical part of home gardening. As water becomes scarce we need to be more aware of conservation. The key is using water efficiently not extravagantly.

1. Water infrequently but water deeply and thoroughly. This will encourage deep rooting and greater root tolerance in dry spells. **Don't water every day.**

2. Mulch the soil surface to cut down on water loss due to evaporation. We recommend a one or two inch layer of **Fine Bark** or **Soil Pep**. Leaf clippings or newspaper will also work. Apply mulch around shrubs, trees, flowers, vegetable gardens and even in containers.

3. Water early in the day or late in the evening, especially during the hot summer days, to reduce evaporation loss.

4. Aerate your lawns to insure maximum water penetration. You can also spread **Peatmoss**, **Coconut Fiber** or **Soil Moist** over your lawn after aerating it.

5. Don't be a gutter flooder. Turn off lawn sprinklers before water is wasted. Water two times a day if needed, but don't water every day.

6. Properly condition your soil. Water does not easily penetrate clay soil and water passes too quickly through sandy soil.

7. Raise the height of your lawn mower. Keep your lawn two to three inches long during the summer. Longer blades of grass can help the lawn go one or two days longer between waterings.

8. Discourage water competition from weeds. Keep them pulled.

9. Group plants together having similar water requirements. More plants die from drowning than die from lack of water.

10. Use bath water in your gardens. Soft water is not desirable for flowers and vegetables but won't hurt older trees, shrubs, and lawns occasionally, especially if there is no other water available.

11. Fertilize well in the spring and fall, but don't fertilize much during the summer.

12. Plant shrubs and trees early in the spring, or late in the fall. Trees will withstand drought better once they are rooted thoroughly.

13. Use water holding and water penetrating additives. Mulches are excellent to use because organic material holds water. **Water In**, or liquid dish soap, helps water soak into the soil faster. **Soil Moist** keeps water from draining away too quickly. You can also use **Soil Moist** in containers and when you are planting new shrubs and trees.

14. Hand Water dry areas. Don't water the entire lawn if it doesn't need it.

15. Do not over water older trees. Many trees (apples, maples, pines, willows, sycamores, etc.) do not need much water until mid-summer. Water them deeply once a month from mid-summer until snow fall. Pine trees and junipers don't need as much water as fruit trees and other shrubs. Water plants differently, as needed.

16. Measure how much water you apply. Place cans in several different locations throughout your lawn. Measure how much water is applied to each area. You may be surprised at the difference in the amount of water between areas!

Being "**Water Wise**" not only conserves water but actually helps you achieve a healthier garden.

J&L's Coupon of the Month

Free

**One 3lb Box
Turfmagic® Fertilizer**

Choose From:

**Tomato & Vegetable Food
Tree, Shrub, & Evergreen Food
Pansy & Blooming Flower Food
Rose Food
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Buy More Turfmagic® Fertilizer

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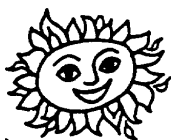
*with coupon
while supplies last*

Regular \$2.98 each

Selection limited to supply in stock. Coupon expires April 15, 2003 or while supply lasts

Photosynthesis

The process enabling a plant to grow and produce food for itself is called photosynthesis, which literally means "*to put together with light*"



A plant needs energy from sunlight, carbon dioxide from the air, and water from the soil. If any of these ingredients are lacking, food production will stop and if any factor is removed for a long period of time, the plant most likely will die.

Photosynthesis formula: Water (H₂O) + Carbon Dioxide (CO₂) + Sunlight + Chlorophyll = Simple Sugar + Oxygen (O₂).

Certain cells in stems and plant leaves can manufacture food energy. These cells are protected by, and located between, the upper and lower epidermis (skin) of the leaf. Chlorophyll, the green substance these cells contain, is the special pigment which traps light energy that can be used to manufacture sugar and starches. Plants such as sugar beets store energy-rich sugar in the root. The extraction of beet sugar (as sucrose) ends up as table sugar, which was originally energy from sunlight.

As sunlight increases in intensity, photosynthesis also increases, resulting in greater food production. Many garden crops, like tomatoes, respond to maximum sunlight and only a few varieties of tomatoes will produce any fruit inside greenhouses in late fall and winter, while sunlight is minimal.

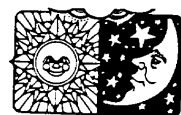
Water is another component needed for photosynthesis. Water enters a plant mainly through the root system and its importance is three-fold. 1. Water is one component in the manufacture of sugar. 2. Water helps to maintain a plant's turgor. (Turgor pressure is the firmness of plant tissue, or, water pressure inside the plant itself) Turgor is needed to provide a way for the plant to move chemicals and nutrients inside the plant. 3. Water provides, and moves, all the needed minerals to the photosynthetic cells for use, repair, and replacement. Fertilizers are absorbed by plants as dissolved nutrients in water. Water also

transports sugars and hormones to other areas within the plant, including the root system.

Another component of photosynthesis is carbon dioxide, a natural component of the air we breathe. Carbon dioxide enters the plant through the stomates in leaves. There is not a shortage of this ingredient and fortunately the plant uses more CO₂ than it produces.

During the night, or when there is no sunlight present, plants use sugar to produce energy needed for plant growth. This process is called respiration. The plants use oxygen and give off carbon dioxide during the respiration process. The plants actually need this process for proper growth and development. So, do not put grow lights over your plants 24 hours a day. Plants need to rest and respire.

Temperature, while not a direct component of photosynthesis is still an important factor. In a temperature range of 65 to 85 degrees F. photosynthesis is the greatest. However, photosynthesis occurs year round, even in sub-freezing temperatures. Many types of evergreens continue to use CO₂ and produce O₂ all winter long, even there is no visible sign of plant growth. Mother nature also helps to distribute O₂ and CO₂ from one location by another by the use of the jet stream winds.



What do the Numbers Mean?

The numbers listed on each bag of fertilizer indicate how much Nitrogen, Phosphorus and Potassium is contained in the bag. Example -16-16-8 **Multi-Purpose Plant Fertilizer plus Iron**

This bag contains 16% Nitrogen, 16% Phosphorous and 8% Potassium. This bag also contains Iron because it is listed as an added ingredient.

The other 60% of the bag may be anything the manufacturer decides to use. It may be other minerals, sand, perlite, or gypsum. Inexpensive fertilizers usually contain sand. The more expensive fertilizers usually contain other minerals, gypsum, or other soil conditioners.

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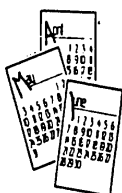
J&L Handouts

I don't know if you noticed but many of the articles in our newsletters suggest that you stop by for a copy of a specific handout. Unfortunately, we are not able to go into a lot of detail in many of our newsletter articles so we end up writing a more detailed version of the article and making it into a handout. Our gardening newsletter is usually how we decide on what new handouts we need to find. We do have many free handouts available to help you with your gardening questions. We also have sets of many of our gardening handouts available for purchase. This year we have put together a set of water conservation handouts. This collection contains many extension service articles, water conservation district information, other water expert's opinions, a few Websites, and some of our own handouts.



Our 2003 Garden Calendar is now available. Stop by and pick up your free copy.

Customers have also requested copies of our previous newsletters. We are working on this request but don't have it available yet. We hope to have all of our gardening handouts as well as our previous newsletters available on a CD in the near future.



J&L Gardening Class Schedule

This year we are changing our Gardening Seminar format a little. Our pruning classes will have the same format as previous years, however, each of the other garden seminars will be more of a demonstration than a formal class. We will have demonstration tables set up about each topic, on the days listed. We will have informative handouts and information available, with knowledgeable staff members nearby to answer specific garden questions. You can visit these demonstration tables at your convenience and return to them as often as you desire.

Seminar - Demonstration Schedule

Pruning	Saturday	Mar 1, 8, 15	10:00 am
	Friday	Mar 7	6:30 pm
Rose Care		Mar 20-24	
Planting Annual and Perennial Flowers.....		Mar 27-31	
Growing Large Pumpkins...		Apr 3-7	
	with a class	Apr 5	10:00 am
Growing Herbs		Apr 10-14	
Planting Containers		Apr 17-21	
Water Wise Gardening		Apr 24-30	
Weed Prevention		May 1-5	
Ornamental Grasses.....		May 1-5	
Pond Care		May 1-5	