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XERISCAPE GARDENING IN THE CARIBOO – by Darcy Marten, Corral Gardens

"*Xeriscape*" and the "*Xeriscape logo*" are trademarks given in 1986 to the National Xeriscape Council, Inc., a nonprofit organization founded to promote and ensure the integrity of Xeriscape landscapes. It means, literally, dry landscape! Dry landscape it is **Not!** The principles of this type of gardening is not endless stretches of cactus, dry and poor looking landscapes, of all sizes, and lacking lushness in their appearance. Rather it promotes the right plants, in the right places, with attention to soil, water and light requirements for healthy growth. The only truly drought tolerant plants (that need little to no attention) are plastic and silk... not what most of us want in our garden.

What we really want to do is to have a balance in our living spaces that provide time to enjoy the gardens, our friends and families, without sacrificing both precious time and resources. This is money and WATER. The Cariboo yard should be a reflection of your personality and an extension of your inner space. What do you use your yard for? Do you have children or grandchildren that use it? Have you pets? Do you like to entertain or just sit back and relax? How much time and money do you have to invest in your garden? These are the most important questions because it will help determine where to begin.

The truth of the matter is that lawns are the biggest users of water and consumers go to great lengths to make them perfect. Thanks to expensive promotions by chemical companies, people are led to believe that they must be green at all times and free of any weeds and insects. We all are paying a high price for this because by the use of fertilizers and pesticides on lawns, our water is getting contaminated and it find it's way into your home, on children's feet, and the paws of your pets. Make no mistake chemicals are deadly and cause illness and diseases, as well as Big Money for companies and their shareholders. I am a believer in organic gardening principles to prevent these residues from leaching into the groundwater or on to the street and into the gutter, again getting into our watersheds. But having said this, a lawn, however brown and dead looking, will recover quickly once the rain comes... like areas of Africa that come alive with the rains.

Grasses therefore are truly "drought tolerant", as they have the ability to shut down and go dormant, to save themselves, despite their dead looking appearance. Other plants have the ability to look good with little or no sign of stress and then can abruptly die from lack of water. I will try and explain a bit from a botany point of view so that you can be better equipped to recognize plant health. We all really want to have healthy plants that will live during periods of drought and still look pretty good.

Let's look at: plant selection, soils, planning and design, water requirements, mulches, grass, and maintenance.

1) *Something About Plants*

Reading labels: a place to start in selecting a plant but reading **plants** is better. Let's look at roots, stems, and leaves (starts next page).

ROOTS:

Without roots drought tolerant plants would perish. They hold the plant in the soil anchoring it from wind and from predators; they are the storage organs for the plants food reserves; and they absorb water and nutrients to feed the growing plant, whose basic function is to absorb carbon dioxide, produce oxygen and go to seed.

Some roots are "fibrous" and contain many shallow fine roots to quickly absorb water and nutrients that are close to the surface. This type is good for erosion control and often has underground stems to assist in the process. Plants with this type of root system benefit from mulches to keep the soil moist for a longer period of time, while they establish themselves. Grasses and ground covers are good examples.

Some plants have a "tap" root that extends deep below the surface of the soil where water has percolated and nutrients have gone. These are the carrots and dandelions of the plant world. Their long strong root can store food and water for long periods of time, and they can survive for long periods without water because they are deep in the soil where it is cooler. They also benefit companion plants because they bring nutrients to the surface and can be an indicator plant for poorer soils.

Others have a "fleshy" roots like spaghetti. This type of root also has the ability to store water, and can be found on plants designed for the shade. These plants get sunlight and moisture early in the season, before the trees and larger plants are fully leafed out, thus shading them. Hosta and bleeding hearts are 2 examples.

STEMS:

The stem of the plant enables it to reach for the light, holds the leaves, and has the ability to produce many plants. Whether it is a stem above or below the ground, it divides into sections that will give each leaf it's own space for maximum exposure to sunlight and air circulation, that allows for the formation of well spaced branches. Therefore, the stems function is for the support of it's leaves in such a way as to expose the leaf to the sun for the greatest production of food sugars.

Underground stems are called; rhizomes, tubers, stolons, corms, and bulbs. They are great storage stems and enable their plant the ability to last for long periods without food and water. Examples are Iris, peony, grasses, crocus and lilies respectively.

Hidden buds on the stem can be triggered to grow if the plant has been damaged by insects, disease, the environment, or by pruning. They can remain dormant for many years. Some will form branches so that a plant doesn't fall over from the weight of it's leaves. If a plant can produce leaves again the following year, it will harden the stem and become "woody". Not many perennial flowers do this but shrubs and trees do. Basically, a shrub will have many stems and a tree one main stem. In order to become woody a plant then uses up energy to make the stem hard and thus protected during it's dormant period.

LEAVES:

The work horses of the plant, the leaves, collect the suns energy and turn it into sugars/food for the plant. In tough times the plant will drop it's leaves and wait for a more favorable time to re-leaf. We have all seen plants drop leaves earlier than expected and this can be caused by prolonged periods of drought. I have completely removed all the leaves from shrubs, that have been attacked by

disease or an insect, early in a season, and they have produced another set within a few weeks. Remember the plants job is to produce leaves, flower, and set seeds.

Leaves have to also reduce water loss, reflect excess light, and protect the plant from predators. They do this by their size, color, texture, and thickness. Cactus spines are modified leaves and at their tips water will condense and run inward to the plant and then down to the soil. The drought tolerant plants tend to have white or hairy leaves, or be waxy and thick. If you go into the mountain alpinies the plant leaves there will be smaller and hairy in dry areas, and lower to the ground so that drying winds strike them less. In a shady area you may find larger leaves on the plants with a more waxy or thicker leaf. Leaves need to maximize the sunlight without drying out and absorb water without drowning. They make food and avoid dehydration.

The growth of the plant is dependant on it's environment: the quality and quantity of air, light, soil, temperature, and water that the leaf receives. Examples:

-a plant can have good soil / water / temperature... yet poor light = weak growth

-a plant can have good soil / water / light... yet poor temperature = weak growth

-a plant can have everything good... grow well... and still be damaged by competition, insect, or disease.

In our gardens plants have the ability to have optimum conditions and will therefore reward us with healthy growth and beautiful leaves, flowers, and fruits. Drought tolerant plants can by this analysis be lush in both sun and shade. So if a label says a plant can be in "full sun" take a look at it's leaves. Are they grayish or white? Do they have a thick or waxy feel to them? A grayish and hairy leaf will be well suited to a hot dry area with long periods of sunlight like N. Lakeside or the Chilcotin, while a thick and waxy leaf will do fine in the same location on S. Lakeside or at Horsefly/Likely where there is more humidity in the air from the water close by.

2) Soil & Dirt / Dirt or Soil ? Let's Talk about It!

In the Cariboo we are blessed with clay, ant hills, and rock. The first thing you should do is figure out what you've got before you plant. The type of soil you have will assist you in the planning of your garden and any changes you may wish to make. The right plant for the site will make the job easier because digging holes in our soils is enough to make a grown man cry (no offence guys). It also will make the plant more tolerant during periods of stress... be it too wet, too dry, too windy, or too cold. Some plants require poorer soils and a rich soil will make them weak and "leggy", prone to insects and disease, all from being *too good* to them!

Simply dig a small hole in proportion to the size of the plant. A tree should have a hole about 6-8 inches wide and 12-16 inches deep. Then take an ice-cream bucket of water and dump it into the hole all at once. If the water is still there in the morning you've got heavy clay and could build a natural pond. If it drains as fast as you put it in, then you have a sandy and rocky type of soil. Clay soils are nutrient rich because they don't percolate or filter downward into the soil, however, they are oxygen poor and most plant roots need ample oxygen to grow. Sandy/Rocky soils are oxygen rich and nutrient poor because they drain so well.

Both types of soils found in the Cariboo will benefit from organic matter being added. In the case of the clay; the addition of some sand to break up the particles of clay and allow air to enter will be of help. If you like peat moss use caution... because peat moss is very hard to get water into when it is dry, and the combination is like making bricks! Compost or leaf mould would be a better choice. The sandy soil could use the peat moss but as it has few nutrients. Compost, top soil, old manures (not

chicken), or leaf mould is best. NOTE: this will depend on your choice of plants.

The existing soil be it clay or sand is what the plant will be spreading it's roots into so avoid making the planting hole for trees too different from the surrounding soil (1/3 amendment is usually enough). The addition of bone meal into the holes is good as it is a safe and organic way of feeding the new plant. Also, be sure to make a test at each site where you wish to plant a tree or shrub because areas in the landscape can vary.

Soils or dirt with lots of worms in it tells the gardener that the ground beneath is fertile. Worms tunnel into the soil breaking it up, allowing water and air to penetrate to the root zone and they feed the plants with their castings as they go along. Next to bat guano, the worm has the richest food for plants. Creating healthy soil will create healthy plants so start with the soil. The right plant in the right place will reward your efforts with a low maintenance, insect and disease free garden, without the use of chemicals.

THE BASIC SOIL DIET & COMPOST:

The creatures that live in healthy soils, of all types, require raw organic matter balanced with carbon and nitrogen. Carbon is the dry stuff you have around like dead dry leaves, shavings, dry grass clippings, and the remains of branches and stems. The smaller the pieces the faster those little guys can eat 'em up! The nitrogen is the wet stuff like the remains of the salad, or the scraps from making dinner (not meat), the green clippings from the lawn mower, and trimmings from the flowers. It generally takes about 25-30% carbon for 1 part nitrogen. The "carbs" really get those guys going and they take up the nitrogen to do it... therefore, if you have too much carbon in your soil the plants may show signs of nitrogen loss and turn pale in color. This is something to watch if you use bark mulches around perennials and flowers. Compost and leaf mould are the best for all kinds of plants.

Leaf mould is simply the remains of the fallen leaves at the end of the gardening season that have been layered into a compost pile as carbon, or that have been collected in the fall and have been chopped up and put on to the soil to be broken down by earthworms. I have always been saddened by people who burn their leaves because they are burning black gold, free food for the garden. I tell myself they must be diseased and the ash will be going into the compost.

AIR & WATER:

The best compost and leaf mould in the world is of no use if your plants have no air. Plants that are weak and pale will often die from lack of oxygen not water. We see this easily in house plants that are over watered, but it can happen in your landscape too. The ideal soil is one that enables water to reach the deeper layers of the soil and retain it for the roots to reach as a plant grows and matures reaching deep to establish itself. A good soil should retain water, have a structure suitable for the plants living in it, and be able to feed the plants.

WEEDS:

Weeds by themselves are little more than work for a gardener, but they are a good way of telling you how your soil is if there are many weeds in one area. This is a simple way of deciding what plants will do well without having to change the soil much (if at all). Keep in mind that annual weeds may have blown into the area for a season but the perennial ones are those that tell you about the conditions of the soil. I'll use the most common ones that most of us should know.

Common Weeds:

- Dandelion: low lime soils or acidic (evergreens), clay soils.
- Daisy: poor soil with low fertility, often waterlogged or poorly drained.
- Moss: poorly drained, shady and often acidic.
- Pineapple weed: crusty, hard soils.
- Chickweed: although a real pain, this little plant shows that the soil is fertile (provided that it has good color).
- Bindweed: crusty, hard soils
- Quack grass: this nasty spreading grass will happily grow in all types of soils, but indicates hard, crusty soils.
- Horsetail: acidic, sandy soils that often times have been water logged. This weed is very hard to get rid of if you get it in purchased top soil.
- Mustards: show a neutral soil that a wide range of plants can grow in.
- Pig weed: fertile soils, again, provided that their color is good.
- Thistle: clay and heavy type soils.
- Yarrow: leaner soils, sandy and dry.

NPK-Nitrogen, Phosphorus, Potassium:

These are the three most important nutrients for plants. In organic fertilizers, the numbers used will never be more than single digits. The nitrogen is what the plants need for growth and nice green color in their leaves. The phosphorus allows for good root development and can be found in bone meal. Potassium is used to produce flowers and seeds for the plant.

Getting back now to looking at the plant to see if it's healthy. If a plant is lacking nitrogen it will not be growing well and the leaves will be pale and smaller than they should be. Older leaves show the symptoms as new growth often has a lighter color. Many plants will yellow if they are too wet and drowning, or if the soil is too sandy for plants that need more nutrition. Phosphorus shows itself as a purple cast to the leaves underside and stems. Tomatoes are heavy users and show symptoms quickly. Too cold or wet soils can cause this as well. Geraniums will look this way if they are being hardened off by direct sunlight too fast. Potassium symptoms will be shriveled or curled leaves that will be dry along their edges... stems are weak and floppy with spotting on the lower leaves. Excess drainage in sandy soil or a soil too acid will cause this problem. So you see compost and leaf mould are great for all types of conditions because they are around 1-1-1 in amounts of NPK.

Nitrogen can be found in alfalfa (rabbit food pellets or blood meal). Rabbit pellets will not burn plants, however, use blood carefully as it can burn. Seafood scraps are good too but can encourage animals from their smell.

Phosphorus is in bone meal. Look at the source though and make sure it is ground bones and not a chemical.

Potassium can be found in "clean" wood ash. I say clean because it should not have been burned with any papers or garbage, and it should be used with caution because over use will cause mineral imbalance. Just a light dusting will do.

PLANT CHOICES FOR SOILS:

Plants will grow just about anywhere, and given optimum conditions, will reward the gardener with

long life, ease of maintenance, beauty, and remain disease free! Once you get an idea of what you have for conditions in an area... then look for a suitable plant. Here are a few ideas for the Cariboo.

a) Hot-Dry-Lean and Mean: Russian Olive, junipers, pines, lilacs, sages, caragana, succulents, yarrows, daylilies, poppy, nasturtium, bergenia, flax, geranium, and grasses.

b) Wet and Waterlogged: Rugosa roses, cranberry, viburnums, dogwoods, willows, manitoba maples, box elders, ninebarks, elders, astilbe, ligularia, japanese iris, and bee balm.

c) Hard Clay: Red maples, spruces, elders, dogwood, willows, forsythia, lilacs, asters, heleniums, rogersia, and anemone.

AREAS WITH ROAD SALT:

The only way to get rid of excess salts is to wash it away. We are talking about the wise use of water so there are plants that can tolerate this condition without the use of large amounts of water. Birch trees, junipers, honeysuckles, weigelas, hollyhocks, delphiniums, blanket flower, sunflowers, poppy, and yarrows are a few choices.

3) Planning and Design

In order to get the most from your hard earned money and effort you should decide on what you want the garden to do. Some things to ask yourself would be...

- am I starting from scratch with a new landscape?
- am I renovating an old landscape?
- is the area one with a problem that I need to correct? soil/ light/ eye sore?
- what do I want to do in the area?
- how much of my time do I want to spend in the garden?

This is a place to start... Trees are the biggest expense, they usually take the longest to grow and therefore you should start with a tree if you want one in your landscape, if it fits in with what you want to accomplish.

TREES:

Start by testing the soil, as we have discussed, and determine if your choice of a tree will do well there. Remember that a tree suited to that soil and site will grow quickly and healthy outward into the existing soil and establish itself with little effort on your part. Take a look around for overhead lines and below for paths and pipes that may be in the way of your trees natural growth habit. Nothing looks worse than a tree that has been cut hard on one side to fit the space.

Now that you have the space, do you want flowers, fruit, fall color? The shape of a tree is important because in the Cariboo we see our trees without leaves for a long time. Consider the bark and any fruit as interest too. An evergreen will give you year round privacy but lacks the interest of flower and fruit.

The scale of the property is to be considered because a tree that grows 35-50 feet high and 20 feet wide will look like a monster in a small yard and will make the home look small and dark. Trees that are manicured into shapes will suit a home with a similar style. Let your yard be a reflection of the inside of your home and your personality. Color always plays a role.

SHRUBS:

As with a tree, shrubs have unique growth habits and shapes that can really make your yard beautiful. If a tree isn't needed and a shrub would do to give the landscape some definition, use the same considerations; size, shape, leaves, bark, flower, fruit, and winter interest. Keep in mind that deer have been a problem in recent years and you don't want to provide a meal for them that would take years to recover. Dogwoods, with their bright stems, would benefit from a spring pruning by the deer and you would have a summer and winter plant in the yard with the freshest and brightest growth with no work on your part! Many fruiting shrubs will feed the birds before they are of concern for bears, and once free of their leaves, have interesting bark.

Sit back in your favorite chair and take a look outside. View your yard from your windows, and decide while looking out where to place things in the yard. Again, we spend a great deal of time indoors and we want our yard to continue to be of enjoyment for us. If a tree or shrub has to block a view make sure that you have someone inside and outside at the same time before digging the hole. The person on the outside will be the plant and they will assist in the proper placement. It can be deceiving when viewing from outside only.

If your yard has a path in it that pets or family use as a short cut, consider planting with it in mind because it is difficult to alter habits and much easier to incorporate that flow into your design.

FLOWERS:

The frills on the bonnet are the flowers. Perennial plants, that come back every year, generally cost a bit more but will reward you with years of beauty. There are many to choose from and all sorts of situations, from hot to cool, can be Xeriscape. What you are trying to do is put the right plant in the right place and give it a soil that is suitable. Thereby creating a place for it to grow with little help from you and minimal water. A most common mistake is to over plant. This creates a situation for competition for root room, nutrients and water. Also, plants that are too close together tend to be more prone to insects and disease due to poor air circulation. Buy a few and let them develop. This is where annual plants come in.

Annuals are those plants that grow for the season and then die. Some drop seed that grows the next year but most are from areas with warmer temperatures and their seeds just perish. They can provide summer-long color (while the perennials are maturing). They also cover the soil with shallower roots and aid in keeping the soil cool.

STYLES and DESIGN:

Let the style suit your home. A wild looking garden doesn't suit a formal house (especially if it is formal on the inside). The colors you pick are important too because reds and yellows are hot colors, not at all calming. Pinks and blues are cooler and tend to *feel* more calming. White gardens generally are the most fragrant because a flower that is white has to attract a pollinator with scent not color.

Gardens can be designed for wildlife use or for children to enjoy. A well placed hedge can keep toys from going on the road with a child not far behind. They can be for late evenings, as with whites and lighter colors that are best seen at night when the dark colors have faded. Maybe food production is important to you? Then plant a garden with this in mind... your choice of plant material can make a yard filled with *food* plants still look beautiful.

The lines of the landscape are of importance. Sharp lines and edges are more formal and even

looking, suitable for a formal house. They can be more time consuming because a straight edge near lawns has to be kept crisp and may require some weed eating to maintain. Softer round edges can easily be mowed.

Consider scale when planning planting beds. If you have a great expanse of lawn and want to put in a focal point, making it too small will look like a stamp on an envelope. Try getting out a garden hose and lay it out in a shape that appeals to you. Stand back or better yet go inside and take a look. How does it look? Most often it is too small. Then you have the grass to deal with. Cut the grass in pieces and then turn them upside down where they are. Put some decent soil on top and plant *into* it. The grass will break down and turn to humus thus feeding the plants later on.

Next to trees, walkways and borders can use up a sizable amount of a budget. Concrete block retaining walls and garden beds made with wood are a cost to be considered in your planning process. These have to be put in *before* the plants, as it is next to impossible to do afterwards and takes a lot more time. It can also stress the roots of plants. If you want to plant at "lawn level" consider putting in a mowing strip for the wheels. It aids in keeping the grass out of the beds and no weed eating is needed.

There are many styles of gardens from the formal and informal, to the country English style, tropical, and theme gardens. Food, fun and friends! Whatever you decide on, *all* can be water efficient and most can fit your lifestyle.

WATER REQUIREMENTS:

The lean and mean garden, for plants that like poor soil and lots of sun, will use the least amount of water. They still need soil that is deep, and has the ability to hold water deep within the soil for their roots. They tend to have thick roots that can hold water.

The average gardener wants a bit of everything, so the grouping of plants with similar likes is paramount when considering water use. Taller plants towards the back and shorter as you come forward. Keep in mind that the closer to the water source or tap the easier it is to give them a drink. Place your special plants there, where it is easy to accommodate their likes, and put those that need the least amount of water and fuss the farthest away.

If you have a spot where you intend on putting a bench or chair for relaxation, consider putting the plants that require more work there where you spend the most time, and may feel like fluffing your nest a bit. Baskets and pots filled with annual flowers dry all too quickly so again, site them close to the water to make your job quick and easy. It's no fun dragging a hose or carrying heavy buckets across the yard on a hot day, after work, or on your day off!

Lawns are heavy water consumers. Partly because they are over watered and partly because they don't have enough soil depth to sustain them during hot spells. Remember, no matter what you plant or where... the soil, and the amount of it, is what your plants have to live in. The soil is what the roots have to keep the plants alive.

In my experience people are either over waterers or under waterers. If you like to put your hose on "trickle" overnight you should first figure out how much water this trickle is giving the plant or tree. In the morning take a large garbage can and put your hose on trickle. See how long it takes to fill it? More often than not the plants are being given far too much water. Plants need air at their roots and are easily stressed by too little of it. They can yellow, wilt and generally look poorly. When they start to look bad or droop people tend to go for the water and aggravate the problem to the death of the plant.

Dig the hole to suit the plant, then fill it with water and let it drain. Put in the well-watered plant of your choice and fill in with soil. Then water again to settle the soil. The ground in the root zone is now moist and cool, ideal for the new plant to root into. If the plant was heavily rooted in the pot, water near the base of it, where the pot was, as this is where the roots are when they dry. Before too long it will be in the surrounding soil and settle in fine.

The watering of pots and baskets can be tricky. I have seen automatic drippers drowning plants and/or also plug up... when these plants are literally dying for a drink! There have been days, when driving in town, that I have seen hanging baskets on automated drip systems collapsed from lack of water. Frantic, I made calls to let someone know to try and save the poor things. Plants that are allowed to stress out by drying can look pretty bad and never really do well again. If you have trouble this way there is an easy way to help you out.

Get that trusty ice-cream bucket that you had to test the soil earlier, and fill it with water. Count how many seconds it took to fill it up. We all have different water pressures in the city and some are on wells. The average 12" hanging basket, with mixed flowers, in full sun and wind, can use a full bucket each day. Keep in mind that the flowers in the basket are filled out and nicely growing. You can drown new plants with too much water as they have yet to fill out the pot (feed your baskets and pots because they have limited soil).

Apply this same technique to any plants that you water by hand. In the garden bed where there is lots of soil and roots can spread, be sure to water deeply when you do... but *less often* so the roots go deep into the soil where it is cool and moist.

There are sprinklers of every shape and they disperse water in various patterns. Get a few soup cans and place them around your plants in different locations. Now go ahead and water. Check the cans after you are finished and see how much went to each area. Plants need a deep watering infrequently, rather than shallow waterings every day. This is one of the principles of Xeriscape gardening. Putting plants together that have similar needs, in appropriate soils for them, and with a deep root zone to promote overall health and drought tolerance. This is true of any site where there are plants - Sun or Shade!

MULCHES:

The purpose of mulch is to regulate a more constant soil temperature, help retain the soil moisture, and provide organic matter and humus to the soil when it breaks down. It protects plant roots in winter and adds color and texture to the beds. Applied properly, mulch also smothers weeds, making the gardeners job easier. Mulches are either organic or inorganic.

The inorganic mulch such as rock and colored gravels do not break down, offering humus and food for the soil and it's plant life. They hold heat and are best used around evergreens. The needles drop into the rock and look better than soggy wet leaves stuck on them.

The organic mulch will add to the soil, and if you find yourself busy... the plant debris will slowly rot and blend in with the mulch. Please use common sense when mulching. For instance, because it keeps the soil cool, you don't want to put it on too early in the spring, as it will keep the ground from warming up. On a wet soil it can rot tender roots by not allowing the sun to evaporate the moisture on top of the soil. Excess mulch can give a home to slugs and rodents that would like nothing better than to eat from your garden.

Some **organic** mulches to consider would be:

- Grass clippings: put on thin if green and thicker if already dry.
- Bark: larger chips for trees and smaller chips for flowers (so it breaks down easier for their roots).
- Evergreen needles: great for acid loving plants like blueberries, hydrangea, lilies and lupins.
- Straw: provided it is weed free and chopped a bit finer than for animal bedding. It is a great soil conditioner but as it can blow around and get messy. I would recommend putting it under a more expensive mulch.
- Sawdust: not cedar, but other sawdusts are good for the garden to add a lightness to the soil, be sure to watch for nitrogen loss as the sawdust needs it to decompose. Use old rotten logs instead as they are already decomposing, or compost first. If needed you may have to add nitrogen to your plants.
- Leaves: can cause matting if they aren't chopped up first. I have always run the mower over them in the fall and bagged the chopped up leaves till the spring when I would add a nice layer over the warmed soil. I hardly had any weeding to do and the worms came to the surface to munch on them thereby aerating my soil and leaving their casting behind to feed my plants.

When applying a mulch around plants be sure to keep the mulch away from the stems and trunks. A hot mulch of green grass will cook tender flower stems and surface roots. A thick layer of bark around trees will soften the trunk bark and give insects and diseases a place to thrive.

GRASS:

Lawns, as I have said earlier, are heavy water users, for the most part, and take up the most of a gardeners time to maintain. In the Cariboo, the best time to seed a lawn is in late summer and fall when the cooler temperatures require the least amount of water. Birds can take care of seeds and although a seeded lawn is less expensive than sod it does require more water and time to establish than sod does.

Like all other plants, grass has to have a deep root system to be an efficient user of water; staying green longer during dry spells. It will go brown and dormant only to recover once the weather improves. Give grass 6-8" of soil, at the least, for good root development.

If you get down and look into the grass you should only see about 1/2" of dry grass at ground level. If the thatch has built up then that indicates that the soil organisms are not working well. Remedy this by aerating the soil to allow the grass roots some air and water. Mulching mowers are good as long as you are not over fertilizing the grass, causing excessive growth and too much thatch.

Lawns that have a bit of clover in them are quite healthy because the clover fixes nitrogen at it's roots allowing the grass to utilize it, thus making it greener. Dandelions in lawns will pull nutrients deep from within poor soils to the surface for the grass to utilize. The use of herbicides to combat dandelions and clover easily get into the water system by being washed off the blades or sent deep into the soil through percolation. Children and pets get these chemicals on their feet and bring it into your home where your vacuum spreads it around. It is worth saying here that if you do put chemicals on your lawn, do not use the clippings for at least four mowings... or you will be putting the chemicals into your gardens.

Healthy or not? Generally speaking if a lawn is overall looking pale or weak it would need to be fed. Do this in the fall with a low nitrogen fertilizer so as not to encourage too rapid growth. That is the beauty of organics... they work slower and allow the organisms in the soil to do the work and

maintain plant health during times of stress. A spring top dressing of compost or manure does the trick quite well until fall comes. If you think the grass has a pest or disease... it will be here and there in the grass - not overall.

Grasses or lawns, should have more than one species of grass in it because they are less prone to insects and disease, as well as changes in the environment. Mow the lawn a bit higher in the summer so it uses less water and shorter in the fall to prepare for dormancy, without leaving too much dead material for the next spring.

MAINTENANCE:

This will not be the same for everyone! Most of the men I know love their lawns and the vast amounts of time it takes them to keep it up is not a chore - they find it relaxing! Others, like my husband, would rather be fishing than mowing and watering a lawn. Given the prices that are being charged to mow lawns these days, I would really consider how much lawn you really need and why?

A vegetable garden can be high maintenance too, with fruit and veggies needing to be harvested and stored. Flowers are work for others who demand perfection in their yard, with not a dead flower to be seen. So you see it is subjective to a certain extent.

What you do know by now is that whatever plants you have at your home or on your apartment balcony, they must have good soil to start with, and enjoy the conditions they are living in... sun or shade. So you have to decide what you do and don't like to do, how much time you want to spend doing it, and who will be enjoying it?

The proper use of plants, soils, mulches, and water, will provide you with an efficient garden that you can enjoy, and one that will be just fine during periods of drought. After all, we all want to go somewhere during the summer, and still have our friends when we return. It can be very hard to find a "sitter" for our yards when we go away.

EPILOGUE

"Thank you for participating in this program. It is my hope that you have been empowered with some confidence to get at it and enjoy the rewards of a yard and garden.

I have lived at my home now since 1978 and my yard has gone through many changes. Some of them have happened because of work loads and aging family members. Other times it has been to make an area that our daughter could play in with friends. Now that she has grown the pets need their space too, however, I miss the veggies and the time spent smelling the flowers... so the yard will change yet again! My old aching back will need raised beds and I would like an area to just sit a spell and listen to some water.

The Garden Centre, that has taken up so much of my time, has been down sized so that those older than myself, in the family, can have some of my time again. I would advise you to take pictures of your home. I have photos going back to 1963 of my yard and records since 1988. I know that the environment has changed, and that we too must garden accordingly... with less water. I look forward to having my outdoor space nice again. I have worked with many people over the past 10 years on their gardens to the demise of my own.

There is so much on the subject that I have tried to touch on many things briefly. I hope you are not disappointed. I will look forward to conversations with you, if you choose, on ideas to personalize your space."

Happy planting,

Darcy Martens