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General Care for the Newly Planted Landscape

"The greatest gift of the garden is the restoration of the five senses." – HANNA RION

You have made an investment in your landscape, which if properly maintained, will bring you years of enjoyment. Your newly installed landscape may consist of many different types of plants requiring different kinds of continuing care. Watering your new landscape is the most important thing you will do for you landscape in the coming weeks. The weeks immediately following installation are critical for the establishment of your new plants. Please refer the "Watering New Plant Installation" sheet for detailed information.

After your landscape begins to establish refer to this guide to answer general questions about continuing landscape maintenance. Consult with a professional when you have specific questions about your landscape and the best methods of care for your plantings.

MULCHING

The recommended mulching depth is 1.5 to 2.5 inches. At this depth, most mulch will accommodate the primary objectives of weed control, soil moisture conservation and temperature modification. Excess mulch, particularly if applied against the stem or trunk of plants, leads to constantly wet bark and conditions favorable for disease development.

Reapply mulch annually depending on the rate of decomposition. When reapplying mulch, bring the total depth to 1.5 to 2.5 inches. Avoid applying 2 inches of mulch in a single application. If there is already 1 inch of mulch, add no more than 1.5 inches of fresh mulch. Don't allow mulch to build up, as this can cause serious problems, such as cankering, girdling roots and reduced oxygen in the soil or excess wetness in poorly drained soils.

If mulching on a scheduled annual basis, time new mulch for early to mid-June. Allow the soil to dry from the spring rains. Mulching too early in the year may trap in too much moisture, causing plant damage.

Mulching reduces the need for close mowing and trimming around trees and plantings, which will help prevent mechanical damage by lawn mowers, string trimmers and other equipment.

Objectives of mulching:

1. Prevent weed growth
2. Conserve moisture in the soil
3. Cool soil surface and stabilize soil temperature
4. Reduce heaving of small plants
5. Add organic matter to soil
6. Reduce soil erosion on slopes
7. Improve aesthetics

FERTILIZING

Fertilizing is important to encourage new growth in plant material. Established plants may require less fertilizer, particularly in a lower maintenance landscape.

Using a high-quality, slow-release fertilizer is preferred. Slow-release fertilizers are characterized by a slow rate of release, longer residual, low burn potential, low water solubility and a higher cost.

Three pounds of actual nitrogen per 1,000 square feet per year is needed to maintain the health of woody plants in most landscape situations.

If foliage color, annual growth or general vigor is not normal, the application rate should be increased to 5 pounds of nitrogen per 1,000 square feet per year. Broadleaf evergreens, dwarf conifers and alpine plants should be fertilized with half the above rates.

Landscape plants respond to three to four times as much nitrogen as phosphorus and twice as much potassium as phosphorus. Woody plants generally respond well to fertilizers with at 3-1-2 ratio of nitrogen, phosphorus and potassium, such as 18-6-12.

The three numbers on the bag of fertilizer represent the percentage of the element contained in the bag (based on a 100-pound sample). A 50-pound bag of 18-6-12 has 9 pounds of nitrogen. If you wanted to apply 1 pound of nitrogen per thousand square feet, the 18-6-12 bag would cover 9,000 square feet. You would therefore apply approximately 5.5 lbs of the fertilizer product per thousand square feet. Before applying fertilizer, calibrate your application equipment to make sure you don't under- or over-apply the product. Always read and follow the label directions provided on the product packaging.

In landscape beds, fertilizing once a year is preferable to more frequent applications, especially with newly planted material. The best time to fertilize in Northeast Ohio is autumn, generally after the first hard freeze in October and before the soil freezes in December. The next best time to fertilize landscape plants would be prior to growth in early spring, between early March and mid-April. Applications may be made up to July 1. Fertilizer applied after this date could delay acclimation to winter weather conditions.

Fertilizing annual flowers may be done either with a granular long-term fertilizer, or with a recommended annual fertilizer (such as Miracle Grow or Peter's Plant Food). Follow the manufacturer's directions. Know your annuals, however, because certain plants (e.g. nasturtiums) will use fertilizer for greenery growth at the expense of flower production.

Five Fertilizer Applications:

Generally the five lawn fertilizer applications should be made according to the following time frame:

First Round: Early spring prior to April 15th or before the forsythia plant finishes blooming

Second Round: Late May around Memorial Day weekend

Third Round: Mid summer around July 4th

Fourth Round: Early Autumn around Labor Day weekend

Fifth Round: Mid November, before Thanksgiving after the air temperature is consistently below 50°F

Lawn fertilization should be applied four to five times per year at a rate of 3 to 4 pounds of nitrogen per thousand square feet of grass per year, applying no more than 1 pound per thousand square feet at a time. Applications should be made approximately six to eight weeks apart. Hire a professional to make the applications or follow the manufacturer's guidelines when applying it to your lawn.

Combined with a well-balanced fertilizer program, the soil pH should be monitored regularly through a soil test every one to two years. Certain nutrients become unavailable to turf or plants if the pH is too high (alkaline) or low (acidic). If a corrective application of lime or sulfur is to be made to the lawn or beds, a soil test should be preformed first so that the proper amount of material is applied.

PRUNING

Pruning is the removal of plant parts to improve the health, landscape effect or value of the plant. You will not need to prune much after the initial installation of your landscape. Pruning requires time, patience, the right equipment and know how. Hiring a professional to do the pruning may be necessary if you are uncertain as to how and when you should prune which plants.

Often we prune without realizing the effect it will have on the plant. Knowing why, how and when to prune will protect and improve the health of the landscape. First, we must understand the different reasons to prune and the various methods of pruning. Pruning for size and shape is the most common reason to prune. Other reasons for pruning include rejuvenation to revitalize older plants, encouraging new growth; corrective pruning and structural pruning for major corrections in trees or shrubs.

There are several pruning techniques:

Pinching is the most basic pruning technique. It is done by using the thumb and forefinger, or a pair of clippers, to remove stem tips of new growth. Pinching keeps the stem shorter, and encourages side branches for a more bushy, compact plant. Pinching is used more for perennial and annuals and less on woody ornamentals.

Top Reasons to Prune:

1. To maintain the natural shape of a plant
2. To limit or confine the size of the plant
3. To remove undesirable growth that detracts from the plant
4. To remove broken, diseased or insect-damaged growth
5. To create a particular shape, such as an espalier or hedge
6. To reduce legginess
7. To promote new growth
8. To improve future flowering and fruiting
9. To increase safety to humans and property

Heading back shortens branches. This contains a plant to a confined area and will encourage flowering and fruit. This method also removes material damaged by winter cold. Branches are "headed back" to the growing point found at a leaf, dormant bud or lateral branch. Hand pruners are most effective for this job.

Thinning is the removal of branches at the points of origin. It reduces the bulk of the plant without dramatically altering the size or form. Ideally, old, unproductive stems are eliminated to allow more light and air circulation, as well as to direct the plant's energy toward producing healthy growth in younger, more vigorous areas. Thinning should accompany heading back to prevent legginess and heavy growth at the end of branches.

Shearing involves clipping outer foliage to create an even surface. Shearing does not follow conventional pruning wisdom, because it leaves stubs at the end of the branches that have been sheared. Plants that can stand shearing are not harmed by this technique, because new growth emerges close to the shearing point. It is a good idea to head back and thin along with shearing, to prevent a leggy and top-heavy plant.

An all too common mistake made during landscape maintenance is the shearing of any or all landscape plants in an attempt to contain them to a certain size. Shearing will destroy the natural branching characteristic of plants that are not meant to be sheared and may adversely affect the health of the plant.

Dead heading is the pinching back of dead or declining flower heads to encourage new or additional flower growth. Ideally dead heading would occur before seed heads are produced so the plant puts its maximum energy into flower or growth production. On annual and perennial flowers, consistent dead heading will produce the best looking and most productive flowers.

The best time to do major, restoration type pruning to the majority of landscape plants is late winter or early spring, before buds break. This is called dormant pruning. Pruning during dormancy allows you to reduce the amount of top growth so that when the plants come out of dormancy all of its energy stored in the root system is directed into the growth on the remaining shoots, making the new growth more vigorous. During dormancy, the plant does not spend any energy on new growth and will have reserves for producing new growth.

Some plants, such as lilacs, forsythia and rhododendrons, set their flower buds the previous season. These plants should be pruned right after they have finished blooming. Pruning these shrubs in the summer or winter removes the next spring's flower buds. Prune evergreens sometime before early August when new growth has hardened off. If evergreen pruning takes place too late in the year, new growth may not have time to harden off before cold weather arrives, which risks cold injury.

You may hear some people say that you should only prune plants in the "right" season, never pruning outside of the appropriate time frame. Generally, pruning plants in the proper season is best. However, sometimes you need to consider pruning "for the reason, not the season." When you have dead, diseased or damaged plant material, or a dangerous branch overhanging a walk or structure, go ahead and prune regardless of the season. Limit extensive, discretionary pruning to when plants are dormant and only do moderate maintenance pruning during the growing months when you're working to contain plant size and shape.

LAWN/TURF CARE

Basic turf care consists of regular mowing, fertilizing (see fertilizing above), aerating and thatching.

Aeration is the mechanical process by which we remove small plugs of soil and thatch from the lawn to improve the flow of oxygen, water and nutrients to the root system of your grass. Lawns are exposed to stress through play and traffic. Irrigation and traffic compact the top several inches of soil, which reduces large air spaces where roots grow readily.

Compaction occurs more readily in heavy clay soil, such as the soil found in the Heights area. It is best to aerify the lawn at least once per year. Lawns that are exposed to heavy use or that grow in clay soils benefit from more than one aeration per year.

Thatching, or verti-cutting, is the process by which we remove the excessive thatch layer (slowly decomposing grass

Mowing Tips:

- Mow as often as required to remove no more than a third of the grass at a time
- Recycle lawn clippings to the lawn when possible, but don't leave clumps
- Cut the lawn as tall as possible to shade the soil (at least 3 to 3.5 inches), which conserves moisture and reduces weeds
- Cut lawn areas in the shade less often and taller than sunnier areas
- Sharpen mower blades frequently (a minimum of two times each season)
- Change directions or the mowing pattern each time to prevent grass from laying over in one direction
- You may cut the lawn shorter in the late fall and early spring

stems, dead roots and general debris) that accumulates above the soil and below the blades of grass. Thatch that is left unmanaged can lead to serious maintenance and pest problems. For example, thatch accumulation of more than half an inch on Kentucky Bluegrass lawns impedes water, fertilizer and pesticide effectiveness. Aerating and thatching together increases their effectiveness by allowing nutrients, water and oxygen to more effectively enter the root zone of the grass opened up by aerating. Thatching is typically performed once per year depending on thatch build up. Thatching just prior to the spring or fall growing season allows for immediate spot seeding of thinner areas before weeds can get a foothold in the lawn.

SEASONAL CLEAN UPS

Clean up leaves, sticks and debris from the lawn and bed areas each spring. Each fall leaves and sticks should also be removed from the lawn and bed areas. Leaves should be cleaned off the lawn regularly so that sunlight can reach the grass. Leaving matted leaves on the lawn reduces lawn vigor and health and will promote disease in landscape beds. Cleaning up old sticks, removing infected plants or branches and leaves, and disposing of them immediately will reduce many pest problems. General spring and fall clean ups are part of good general maintenance practices.

ANNUAL FLOWERS

Annual flower brings long lasting, consistent color to the landscape. You can install summer flowers in late May after the frost-free date of approximately May 15th to 20th, although many use Memorial Day weekend as a guideline. Annual flowers work well in hanging baskets, planting or window boxes, pots and in the ground.

How many color rotations can you plant? As many as you like. You may wind up removing the previous annual flower prior to its full life cycle in order to plant the next season's flowers; this technique will keep your beds full of color from season to season.

Annual flowers take more maintenance than perennials, but will reward you with rich, full colors throughout their growing season.

Typical Rotation of Annuals:

Rotation One: Spring flowering bulbs (planted in October); spring-planted pansies

Rotation Two: Summer annual flowers (planted in May or June)

Rotation Three: Fall annual flowers (planted in September); winter-hardy pansies (planted late fall) last through the spring

Rotation Four: Seasonal color and decorations for window boxes and planters, generally from cuttings

ORGANIC PRODUCTS

Good plant health is the basis for any landscape maintenance regimen. A healthy landscape is better able to survive stress induced by drought, pests or injury caused from storms or people. A landscape that is stressed will be more susceptible to insects and diseases.

Using good cultural practices to maintain your landscape will go a long way toward keeping your landscape healthy. The differences between products marketed as organic versus more traditional products depend on the type of product and the manufacturer.

Some people are interested in using organic products in their landscape. While we don't discourage their use, we don't necessarily recommend organic products either. Simply because a product says "organic" on the label, or is advertised as such, does not necessarily make it the best solution for the landscape.

Understanding what you're using and putting into the landscape is critical, whether you're using organics or more conventional fertilizers and pesticides. Proper application rates are critical to improved plant health. Always use products for their intended purposes.

Regardless of your choice to use regular or organic type products, focus on overall plant health care and you will need fewer reactive solutions to problem pests in the landscape.

CHEMICALS

If you use salt (sodium chloride) on ice during the winter, beware! Salt applied to walks and driveways to melt winter snow and ice, often causes plant injury. This injury won't show up right away, but typically appears in late winter and early spring when trees and shrubs break dormancy and roots begin to absorb nutrients and water from the soil. Plants can be injured by salt in many ways.

First, salt can create a drought-like condition around plant roots by attracting and holding water that would normally be absorbed by the plant. Salt spray occurs along high-speed roads, and salt is deposited directly onto foliage of evergreens, which causes it to later turn brown. Salt also increases the sodium content of the soil (from sodium chloride), which can damage the soil structure, and restricts the amount of nutrients, water and oxygen available to plants. Finally, chlorine ions from salt are absorbed through roots and transported to leaves and shoots. When chlorine reaches a toxic level, it can cause a dried, burned effect on leaf edges, known as “marginal burn” or “scorch.” Deciduous plants affected by road salt usually exhibit marginal burn, twig dieback, stunted, yellowing foliage and premature fall color.

During the winter, use calcium chloride or other products labeled for use around the landscape if possible, which are not as harmful as sodium chloride. Avoid piling snow and salt around trees or other plant beds, and don't pile it where runoff will directly drain into plants when the snow melts.

Other than salt that you might intentionally be spreading in your landscape, some chemicals such as petroleum products or pesticides can damage the landscape. Be careful to keep leaking gasoline powered equipment off of grass and other planted areas. Gas leaks or residue can kill grass or tender plants. Improperly applying pesticides may also cause damage to the landscape in ways that you may not have anticipated.

PESTS IN THE LANDSCAPE & IPM

Pests that might require pesticides to reduce or eliminate them in the landscape come in different forms. Weeds, insects, disease and small animals can be managed with varying degrees of success without necessarily having to make pesticide applications. Understanding integrated pest management (IPM) as a method of managing your landscape will help you manage expectations, costs and landscape quality.

Pests are not always a bad thing in low concentrations. For instance, one or two grubs per square foot in a lawn will not cause severe turf damage. The tolerance for pests in the landscape is determined by the homeowner, who must weigh the cost for control against the benefit the application will make.

Integrated Pest Management is:

- eliminating insect, disease and weed pest problems — not eradicating all pests
- applying pesticides, fertilizers or irrigation only when the benefits outweigh the costs
- considering all of your pest management options, including natural, biological, cultural and chemical methods

WEEDS

A weed is a plant out of place. What might be a weed in one garden or lawn is welcomed in another. Identifying the plant is the first step. Simple mechanical removal of undesirable plants is the easiest and most direct method of control. There are both selective and non-selective herbicides on the market for chemical control of certain weeds.

DISEASES

For diseases to be present three things must exist: 1. a susceptible host (the plant), 2. the pathogen (disease) and 3. the right environmental conditions. All we can control is the selection of the plant material and how the environment is managed. Continually damp or moist areas in the landscape are more likely to exhibit disease symptoms on more susceptible plants. Spraying fungicides may hold a disease in check, but does not address the reason they may recur. Adjusting the surrounding environment to increase sunlight or air movement may be necessary.

INSECTS

Generally, insects will not decimate a landscape. However, certain insects on some plants may cause irreversible damage and should be contained as soon as their presence is identified. Proper identification of the plant and insect are critical to determining if an insecticide application is necessary.

Insects are fairly opportunistic and may attack plants that are in a weakened state. Maintaining good plant health is the first line of defense against invading insects.

Growing Degree Days (GDD) are a measurement of the growth and development of plants and insects during the growing season. Each season, plants leaf out and flower in approximately the same order, and insects emerge and develop in approximately the same order. The GDD measurement increases as temperatures rise. Scientists have studied the correlation of flowering plants with insect emergence so that it is easier to manage insect activity based on the flowering sequence of the plants in the landscape.

While we can't predict each year that Saucer Magnolias will bloom on April 5th, we do know that they will bloom consistently at about 133 GDD. The actual bloom time or emergence of an insect will vary from season to season due to weather variations. The actual temperature experienced by a plant or insect is influenced by several factors affecting growth and development. For instance, depending on the weather, an organism's temperature may be a few degrees more or less than that recorded. An organism may spend its time in the shade or under direct sunlight. The fertility and nutrient content of the soil directly affect the growth rate of insects and plants. The presence of weeds and precipitation may indirectly influence development.

Using GDD as benchmark for when to begin looking for certain things to occur in the landscape is a more effective way of monitoring some pests. Poorly timed preventative pesticide applications may be a waste if the targeted pest hasn't emerged or has already reached maturity beyond a suitable control point. Knowing when to begin looking for a particular insect type allows you to monitor its presence and then to determine if the population requires an application, followed by a well-timed application on the pest itself. This will reduce the amount of pesticides that are used.

You can find more information about Growing Degree Days at www.oardc.ohio-state.edu/gdd/

CONCLUSION

"Despite the gardener's best intentions, nature will improvise." – Michael P. Garafalo

Sometimes your plant material will not survive, even with your best efforts. A few of the things that will cause this to happen are: cat/dog urine or spray, severe weather (dry winds, lack of snow cover, excessive rain or lack of rain, extremely cold winters, extended or truncated seasons), fungi, insects and diseases. These factors cannot be anticipated, and sometimes they cannot be controlled. A landscape is a work of art, and always a work-in-progress. There are too many factors beyond the gardener's control for complete success to happen often. The plant that absolutely exceeded your wildest expectations this year may not come back next year. Losses are to be expected, even to the most attentive and knowledgeable gardener.