The Care and Feeding of Your New Lawn
All You Need to Know about It's Care

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1)Establishment
2)Fertilizing
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Introduction

This manual is a simple, straight forward "how to" book on lawn care, maintenance, and all of the necessary steps to establish and maintain a beautiful, first class lawn. It is written in simple terms mainly with instructions on how to go about a particular maintenance project. Just follow the instructions and you will be on your way to a lawn that will be the envy of the neighborhood. Our company's business is lawn care maintenance, establishment, installing irrigation systems, sod work, landscape construction, retaining walls and all of the related projects. We have taken our 17 years of experience and education and laid out the path for you to follow, this should eliminate most of the mistakes we see the typical homeowner make when trying to establish or maintain a lawn. Remember while undertaking a lawn renovation, this is a long term project. No lawn is going to go from looking like a weed patch to looking like Augusta without time or work. We typically ask for one full year to get a lawn under control. Since different weeds grow at different time of the year, we cannot control them until that time, so a one time application of weed control isn't going to control weeds that will come up later in the year. Just have patience, you will see a lot of immediate results, greener grass, thicker grass, less weeds, but it may take a year to cover up all bare spots depending on the type of grass in the lawn. You may even have some bad luck along the way, like after seeding, a flooding downpour comes and washes ruts in the lawn causing you to have to reseed the lawn, this type of thing happens. Be patient, follow instructions and if something like this happens, just remember lawn care should be a release of sorts, relaxing, a form of stress release and something that you enjoy.

If you have trouble with a particular item in the process, email us at info@lawnmastersllpc.com and we will be glad to help work you through the problem. Good luck, and go tackle that lawn. Also go to our companion web site at WWW.LawnMastersLLPC.COM for more information on all your lawn care problems.

The Care And Feeding of Your New lawn

Establishment

If you decided you need a new lawn, the old one probably suffered a slow death due to improper maintenance. It only takes a couple of years to return a lawn to it's previous poor condition, so it is important to follow a few simple steps to keep the lawn in it's lush green state it had right after seeding or sodding. A new lawn started from seed or sod can cost thousands of dollars, so if your prepared to invest anywhere near that in your lawn now, be prepared to do a little maintenance and spend a little money down the road on keeping it first class. Some people think that when they see a spectacular lawn, or a golf course, or a beautiful sports complex, that is was probably sodded and it stays looking that way on its own, wrong. It takes lots of work and on going care to keep a finely manicured lawn. But it is well worth the effort put forth when you receive the accolades later, lawn of the month, or written about in the local gardening section of your newspaper, not to mention the peace of mind and relaxation you will receive while working on the lawn.

Establishing a lawn can come about by several methods. These include:

Seeding
Sodding
Sprigging

Seeding alone has several methods to include. We will start from the simplest and move to the hardest, or I should say the most intensive.

Aerate & Overseed – This method is by far the easiest way to thicken up a lawn that is getting weak. It can be used if your lawn is in good shape grade wise, no holes that need repairing, smooth enough to mow without losing a kidney, etc. If the surface or grade of your lawn is very rough, if there are dips, this is the time to correct these problems. After you get a nice green lawn you won't want to go back and dig up spots or dump soil on spots to fill in low spots. Assuming that you have a smooth lawn or you have corrected any problems with it, we will start the process.

Using a *core aerator* aerate the lawn thoroughly, if you don't have a core aerator you can find one on our web store Lawnmasters Web Store . Aerate to the point that you can't look down at the ground and see any spot wider than about 6 inches without a hole poked in it. Let me explain about the aerator to use. I said a *core aerator*, these are machines that will poke a hole in the ground while pulling a plug or core of soil out, and depositing them on the surface. This does a couple of things for you. First it makes a place for the seed, fertilizer, water, and air to go into the soil. Second it loosens the soil relieving compaction in the soil. This is the equivalent to repotting a house plant after it has become root bound. The other type of aerator is a spike aerator. Most turf experts don't like these types. Because they actually cause more compaction in the soil, since

they simply press a spike down into the soil, pushing that soil down and to the sides. Depending on how large your lawn is you can either get a tow behind model to be pulled by your tractor for larger lawns, or a walk behind model that is self propelled. Either will do a good job, but if you have a larger lawn than about a quarter acre of grass, you will be glad you are riding and not walking, or in some cases, being dragged by the aerator. It is quite a job. Aerators can be rented at most tool & equipment rental stores and some garden centers. They will cost somewhere around $25.00 for a tow behind to $100.00 for a self propelled walk behind unit.

After you have aerated to the point that there are no spots without holes, it is time to seed. You can get seeding rates for several types of grass seed at our web site, Lawn Seeding Rates . Spread the desired seed in two directions. Use half of the needed seed spreading in one direction, then, use the other half, spreading in the opposite direction creating a cross hatch pattern. Be sure that you try to be accurate in spreading so that you get an even amount over the whole lawn. Don't spread the seed too heavy at first, causing you to run out before you get the whole lawn covered, or don't put too much on the front lawn leaving half as much to be applied to the back lawn. This will cause thick and thin spots.

The next step is to drag the soil with some sort of drag, either behind your lawn tractor or pull it by hand. A piece of chain link fence with a board nailed to the end of it for weight works great. Take a piece of fence about 4 to 6 feet wide and about 4 feet long, tie a rope or hook a small chain to it, then simply pull it over the entire lawn. The purpose of this is to break up the cores left behind by the aerator and cover up the seed that you have just spread. One of the most important things needed for seed germination is seed to soil contact. Any seed just lying out on top of the ground will probably not germinate, or it will get eaten by birds. The step is a lot of work, but is very important and will mean a great deal more seed will germinate, giving you a thicker lawn.

Now, you're ready for fertilizer. Refer to the Fertilizing chapter in this manual to determine the required amount for your lawn. Spread the fertilizer like you spread the seed, in two directions.

Next, inspect the surface of the lawn. Any spots that were completely bare, or any spots that you have aerated and dragged to the point that they are mainly soil with very little remaining existing grass, will need to be covered with straw. The straw is to retain moisture and keep the seeds moist to ensure germination. Use clean wheat straw which is available at most garden centers, or farm supply stores. Spread the straw to the point that 50 % of the soil is visible through the straw. Or in terms of volume, it takes from 75 to 100 bales of straw (using 50# bales) to cover one acre of lawn area. A word of warning, if you skimp on the straw, you will be able to tell exactly where you did. The straw does a good job of getting more seed to germinate, and retaining any loose soil exposed by the aerating process. However, don't go crazy and put straw down 6" deep. Break the straw apart when spreading it, so that you don't have large firm clumps of straw lying on the ground. These spots will cause the grass to choke out.

The last step to this method is to water, then water again, then water. Don't count on Mother Nature to do the job for you, a golf course waters when it is needed regardless of the weather forecast, you should too. The first watering should be a deep long watering to the point of water puddleing and running off. The next watering needs to be daily, these do not need to be deep, long watering, but instead should be short, shallow

watering. The purpose of these sprinklings is to keep the seed moist. Not soaking, but just moist. Again, any dry spots will not germinate until the proper moisture reaches the seed. So, if you skimp on the watering, you aren't going to achieve as good results as you could. Continue to water until the grass is about 2 inches tall. At this point you can water as needed instead of every day. Refer to the Irrigation chapter for more detailed information on watering.

This concludes the *aerate and overseed method.* Next we will look at other methods used for varying circumstances in the lawn.

Slit Seeding, Power Seeding – These are basically the same thing, just different names. A machine is used that will scrape the ground with rotating tines, or wire fingers, or a star shaped blade causing grooves to be scored into the ground. A lot of thatch, soil and other material will be fluffed up and left on the surface. These machines are rented at the tool rental stores discussed earlier. The slit seeders will rough up the soil doing the same purpose that the aerating did, giving the seed a place to go, and place the seed on the soil at the same time, this saves you one step. These machines are quite a hand full, so if you are not in good physical shape, I'd recommend getting help. Again, we are assuming that you have a smooth lawn or have corrected any problems with the surface before starting this process. In fact, the lawn should be smoother using this method than with the aerating method, because the tines need to stay in constant contact with the soil to do their job. If there are dips in the surface or ditches to cross, the tines will not make contact and seed will not come up in those spots. After seeding the lawn, fertilize as described earlier, followed by the same watering. Straw only those places that are bare soil with no existing grass coverage.

For the really smooth lawn without a lot of trees or other obstacles, I prefer this method. The machines do a really good job if used correctly, so get some instructions from the rental store. Also this method will save you the step of spreading the seed and the step of dragging, if the machine you rent has coulter disks to cover up the seed as the machine works. If the machine doesn't include this feature, count on dragging the fence drag over the lawn, it will be worth it in the long run.

Total renovation – disking, tilling, hauling soil, etc. – The most severe method is total renovation of the lawn. This is needed when you have bumps, humps, ditches, low spots, etc. in the lawn. The first step is to kill everything present in the lawn. Using round up or Gramoxone, spray the lawn to kill the existing vegetation. Round up kills the plant to the roots, but Gramoxone just burns the top of the plant off. If you are killing off cool season grasses like Fescue, Blue Grass, or Ryegrass Gramoxone will work fine. If you are killing off a deep rooted warm season grass like Bermuda you will have to spray the grass 2 or even 3 times to be sure you get it killed. Spray the Bermuda in the summer month of August. Start at Aug. 1, spray the grass, wait a week and look for any Reappearing green. Spray again if any is spotted; repeat the process until no green reappears after one week. Gramoxone works very quickly to burn down vegetation, as quick as one day. If you have the cool season grasses as discussed earlier, use this product, you can get started faster.

Step two – Haul soil in to fill in low spots if they are severe. If the spots are not too severe, they can be corrected in the tilling process. Using a tiller or tractor and disk,

work the lawn up to a fine texture that can be raked easily. Depending again on the size of your lawn, you will need to decide if you get a walk behind tiller, or a tractor and tiller. The tractor will be much less work, but you will need to be able to know how to operate it properly or you will do more damage than good. Another option is to hire someone to do the ground work for you, and then you can spread the seed, fertilizer and straw. After you have tilled the lawn up, start with a drag, again the chain link fence works well, and drag the area to break up the clumps left behind by the tiller. The dragging will level the lawn some, but you still may have to fill in some low spots or do some hand raking to smooth out the area. Once you are satisfied that you have a smooth lawn with no dips, humps or rough spots, spread the seed in the crisscross pattern as described earlier. Follow this with the same fertilizer application described earlier, and finally, spread the straw. Again, get out the sprinklers and let the water flow.

This method is the most time consuming, the most work, and the most expensive, but is needed in some cases. Expect to take from Aug. 1 to Sept. 1 to get the spraying done, the ground worked, and all steps completed. The most delay is in waiting to be sure that you have killed off all existing vegetation. Be patient here, if you don't kill off all of the Bermuda, later in the summer it will start growing back in the middle of your pristine Tall Fescue and will ugly it up, especially in the fall when Bermuda goes dormant and turns brown. You will have brown spots in the middle of your nice green grass in the fall through the winter.

Hydroseeding – This is done by some lawn care companies. The equipment is difficult to use, hard work and is very expensive, so most rental stores won't have this equipment. The cost for having it done varies from area to area, the price ranges from .08 cents to as high as .24 cents a square foot. The preparation is the same as described above for total renovation if the lawn has those serious problems. If there are no serious problems as described in the aeration process, no real preparation is needed to overseed by Hydroseeding other than mowing the existing grass down low. The Hydroseeding method uses a large tank of water mixed with the seed to be used, the fertilizer, and a mulch material. The mulch is a combination of recycled paper and wood products, or either of the two by itself. The mulch bonds with the seed, sticks to the ground covering the seed and retaining moisture. The fact that the seed was soaking in a tank of water alone is enough to get better results than other methods. This causes the seed to germinate faster, as quickly as 3 days. The mixture will be a blue green color when applied. This gives the applicator some help in being able to tell where the mixture has been sprayed. The color will fade with time so you won't have a blue lawn after the grass starts to come up. This method is a favorite of the northern states, it does well anywhere and is recommended highly. The benefits are greater germination percentage, faster germination and a thicker lawn in most cases. The negative is a higher expense since you have to hire it done.

How much seed to use depends on three things. 1) Are you just overseeding and trying to thicken up the present grass? 2) Are you doing a total renovation? 3) What type of grass are you planting?

If you are just overseeding and tying to thicken up the grass by aerating or slit seeding. You can get by with 5# of seed per thousand square feet of area to be seeded. If you are doing a serious renovation, like a total kill and renovate, or if your lawn is

extremely thin and you still are just going to aerate or slit seed, or dethatch and overseed, you should go the higher rate of 8# per thousand square feet.

These rates apply to all types of Fescues or Fescue blends. It is a good idea to add a small amount of winter rye, or annual rye to the lawn in early spring seeding or late fall seeding, or if you have a moderate to severe slope on the lawn. The annual rye will germinate very fast and provide some soil stability and help hold the soil and seed in place until the Fescue germinates. Rye will geminate in colder temperatures and will germinate in about 3 to 5 days. Only use 25% of the total pounds of seed in Annual Rye. In other words, if you are using 1000# of seed to seed your lawn, you would add 250# Annual Rye also. It is best to do two seedings, don't try to mix the two different types of seed in the spreader at once, first spread all of your primary seed, Fescue, Perennial Rye, Blue Grass, or whatever you are using. Then come back and seed the entire property again using the Rye. This way you won't get an uneven mixture of the seed in any one area. Annual or winter Rye is so aggressive that you don't want it to be more than 25% of your grass seed mixture. If too much is used it will grow faster than the predominant grass you want, choking it out or at least causing your fescue to grow slower than you would like.

Warm season seeding is going to be Common Bermuda or some of the newer improved Bermuda's. This is the most commonly used warm season grass. Buffalo also can be seeded along with some new strains of Zoysia (El Toro). Most warm season grasses will be seeded in the 2 to 3# per thousand square foot range. The seeds are very small and a pound of seed is a whole lot of seed. The only difference in seeding warm seasons and cool season grasses is that the time of seeding needs to be from April 15 thru July 15 for optimum results. You cannot seed Fescue during this time period with any good results at all. Go to our website at WWW.LawnmastersLLPC.com for more information on Lawn and Landscaping Tips. You can also sign up for our e-mail newsletter on Lawn and Landscape Tips.

Sodding

Sodding is without a doubt the most expensive method of establishing a lawn. However, it is instant grass that is very nice if you have just built a new house and are

surrounded by mud. I you wait until the ground dries to seed you could be waiting for a while. Sodding is nice because it can be done in a day, depending on how large the area is and if you are doing it yourself or having it done for you. Sodding can also be done in the winter, fall, summer, it just doesn't matter when you do it as long as you do the required maintenance after it is put down. Another benefit is that if you are pressed for time, you can sod at a time of the year when you normally wouldn't be able to seed since the temperatures have to be at the right level to ensure a good stand of grass to germinate. The prep work involved in sodding is just like a total renovation re-seeding project. Make sure you get all of the uneven spots cured in the lawn, work it up, smooth it out, and once you're satisfied with the grade, start sodding.

How much sod will you need? If you don't know how to figure square footage on your lawn, this section will explain it. First, measure the lawn down one side, then measure the top or bottom. This is assuming that you have a relatively square or rectangle shaped lawn. Let's say the top measurement is 100 feet, and the side measurement is 50 feet. Multiply the top X the side and this gives you the number of square feet in the lawn. If you have an uneven shaped lawn with odd shapes, you can take an average measurement of the sides and get close. To figure triangle shaped areas measure the height of the triangle X the base of the area, then divide by 2. If you are after square yards and not square feet, you divide the square footage of the lawn by 9. (9 square ft. in 1 square yd.) When figuring how much to order take the average measurements, as close as you can to accurate, and add about 10% to the figures (square yards). This gives you extra for broken pieces of sod, or to be sure you don't run out at the very end.

When laying sod, if using the small square pieces, lay it in a checker board manner so that you only have one lone seam between courses of sod and not a seam between layers and courses. If the seams line up, cut a piece of sod in half to start every other row so you can maintain the checker board pattern. We find it easiest to start your first course alone the longest straight edge in the lawn, maybe the sidewalk or driveway. This helps to keep the courses straight and tight. When laying the pieces, be sure that they butt securely up against each other with no gaps between them. This is more important with fescue than with Bermuda, since the fescue will not spread sideways (laterally) and Bermuda will. Another tip for trimming the edges of the sod around sidewalks or the edge of the landscape beds is to lay each piece over the edge enough that the sod covers what it need to in the lawn, then cut the excess off using a sharp shovel. Or, if you happen to have one, a "stick edger" works great. After the job is complete, walk over the whole area looking for any holes left between pieces. There will always be some holes where the edges of the sod pieces were not exactly straight. Using some of the scrap pieces where you trimmed the edges, place pieces of sod in these holes and press down with your foot. This will take root and fill the hole up. Next, take a heavy roller, a push type, and roll the sod. This will mash down the high spots and smooth out

the surface. Next, start watering. Water heavy the first time, and then just keep the sod damp for a week. Then start watering less often, but for longer periods of time. This will wet the ground deeper and deeper encouraging a deeper root system. If you happen to be installing the sod on a hot summer day, keep the water hose handy and spray the sod that has been laid as you work. Don't saturate it just yet, you only need to moisten the grass

blades to keep them from totally drying out. After the lawn has taken root, 1 week to 2 weeks, take the roller and roll the sod again, this time after watering enough to make the ground moist, but not muddy. This rolling while wet will make the surface smoother.

Sprigging

Sprigging is a means of starting a lawn by using chopped up pieces of sod. Some grasses, Zoysia and Hybrid Bermuda grass can only be started by sod or sprigs. The method involves the same steps as total renovation, only instead of seeding, you spread the sprigs out on the ground, and then roll them or till them again to cover them with a small amount of soil. It takes about 3 or 4 weeks for the sprigs to start greening up and starting to grow, keep putting the water to them until they start to take off and spread. The amount of sprigs needed is 300 to 400 bushels per acre of ground to be started. If you have a little patience and are for sure you can water every day as needed, use 300. If not, go the higher route. In about 6 to 8 weeks depending on how much you water, how many sprigs were used, etc., the lawn will be covered. You can get a sod quality lawn for between sod and seeding cost.

Fertilizing

Grass Needs To Eat Too!

New lawns and existing lawns, whether seeded or sodded, need to be fed. They are living, breathing organisms just like your dog, cat, a houseplant, or you or I.

Sometimes people will let a lawn go to pot after spending a fortune on getting it started. This just doesn't make good sense to me. As I tell our customers, if your not prepared to spend a couple of hundred dollars per year taking care of the lawn, don't spend a couple of thousand to get it established. A newly seeded, thick and lush lawn will go from beautiful to looking like a pasture in just a few years without the proper care. And by fertilizing or feeding I don't mean just throw any old fertilizer on it, and if one's good, two will really make 'er go. There is a proper way to fertilize, and a proper product or nutrient to use at the right time of year. Let's start with a description of what fertilizer is.

The Nutrients

Fertilizer has 3 major nutrients or components. These are represented by the 3 numbers found on the front of the bags of fertilizer. Like 20-20-20 or 6-12-12. What these actually represent are the percentages of the three major nutrients, Nitrogen/Phosphate/Potash. Each nutrient has a purpose in life and is needed to do certain things to the grass. So you see, it is important to use the proper analysis for the time of year that you are applying the fertilizer. Analysis refers to the combination of numbers on the bag. A 33-3-6 would be considered a "high nitrogen analysis".

Nitrogen- The first number on the bag is nitrogen. It does what most of us want, makes the grass dark green. It also encourages foliage growth or the blades of the grass. In the case of Bermuda grass, the nitrogen helps it spread by making the stolons grow faster, thus crawling on the ground faster.

Phosphate- The second number is phosphate. It helps to aid in germination. It is the most important number for fertilizer used when seeding. A 6-12-12 or 8-24-24 works great for starting grass. Some commercial fertilizer companies will call this type of fertilizer "starter fertilizer" on the bag. Phosphate also helps with the grass plants ability to store food reserves for the winter months and coming out of dormancy in the spring.

Potash- The last number in the analysis is the potash content. Its job is to strengthen and deepen the root system. The key to a good looking lawn in the summer is in its roots. The deeper the root system, the better it can fight off a drought. Also, potash is the main element in preparing the grass for winter. Most "winterizer" fertilizers you see on the shelves are just those that are high in potash, low in nitrogen.

What the numbers stand for is the percentage of each nutrient contained in a bag of fertilizer. A fifty pound bag of fertilizer is not all nutrients, but anywhere from 9 pounds of nutrients for a 6-6-6 bag, to 27 pounds in a bag of 33-10-10. The rest of the material in the bag is filler, or a carrier for the nutrients. The filler could be several types of materials like sand, sawdust, clay particles, etc. Their job is to make the fertilizer move easier, work better, and stay put once applied. To figure out how much nitrogen, phosphate and potash are in a fifty pound bag, multiply the analysis on the bag times how

many pounds are in the bag. This will give you the number of pounds of nutrients there are in the bag. For example, a fifty pound bag of fertilizer that has an analysis of 33-10-6 is going to contain 16.5 pounds of nitrogen (33% X 50 pounds), 5 pounds of phosphate (10% X 50 pounds), and 3 pounds of potash (6% X 50 pounds). Also, there are 13 micronutrients, some are included in some fertilizers, others you will rarely see.

Some of the more common micronutrients are Iron, Boron, Magnesium and Zinc. Iron is the most common, it helps in the grass turning a dark green without encouraging fast, lush growth. Have you ever noticed the dark green, light green stripes on football fields? This is one way the professional grounds keepers achieve that effect. Another is simply by mowing the grass in different or opposing directions. The dark stripes are where the grass has been mowed toward you, the lighter green has been mowed away from you.

What Grass Needs

Depending on the time of year, and what you are trying to achieve, grass needs different amounts of the above described nutrients. First let's say you are seeding or have sodded. Then what you are after is establishment, good rooting and germination if you have seeded. The last two numbers are needed in a 1 to 3 ratio to nitrogen. In other words use something like 8-24-24 for this purpose. It has a high middle and last number (phosphate and potash) and a low first number (nitrogen). We don't want to try to get fast lush growth out of new grass, we want slow consistent growth with deep root growth, that's what this analysis will do. How much to use? We want about 11/2 to 2 pounds of nutrients per thousand square feet of grass area. If you are going for 2# per K, you would calculate the required amount like this. A 10,000 sq. ft. lawn would need 20# of phosphate and potash. So if you are using 8-24-24 analysis fertilizer you would need to apply 8 pounds of this fertilizer per thousand square feet, or 80 pounds over the entire lawn. If you have an established lawn and you want to give it a boost to get the green going. Nitrogen is what you're after. DO NOT put down more than 11/2 pounds of nitrogen per thousand square feet at one time. Depending on the source of the nitrogen or the type of nitrogen, fast release or slow release, you can damage the lawn by "burning" the lawn with too much nitrogen. A good rule of thumb to use and a safe one is to apply1 pound of nitrogen per thousand square feet of lawn, per growing month. If your grass is actually growing, not just green, dormant and setting there, from April through September you would apply about 6 pounds of Nitrogen over the course of the year. You do not want to put this down in a couple of applications, it needs to be spread out over the summer, at least four applications. Our company starts in Feb. then each 60 days we apply again, making 4 or 5 applications depending on the grass type. This is a general recommendation and should be altered to fit your climate and your grass type. Bermuda grass which is a warm season grass, growing from the transition zone south, will require more fertilizer than Fescue. And at different time of the year, since the two grasses have different peak grow periods.

Fall applications of fertilizer are commonly referred to as "winterizers". The purpose of the fall application is to prepare the grass for the upcoming winter, making the grass plant better able to tolerate freezes. And make the plant store reserves of nutrients it will need to come out of dormancy in the spring. Typically, a winterizer is going to have an analysis with a low amount of nitrogen, a medium amount of phosphate, (higher than would be used through the summer), and a high amount of potash. Something like 6-15-30. The actual analysis isn't as important as the fact that the middle and last

numbers need to be higher than the nitrogen. Several mixes you see in stores for winterizers will have no nitrogen at all, very little phosphate and a high dose of potash like 0-6-50. If applying these fertilizer applications yourself instead of hiring it done, a simple way to be sure that your putting down what need to be put down at the proper time of the year, is to go to a lawn and garden center and buy a product that has different bags for each application of the year. Scott's Company has a complete program, each application is a different bag of material containing the herbicide for that time of the year, and the proper analysis of fertilizer for that time of year. As long as you follow the directions on the bag as to how much to put down, you just about can't go wrong.

If you just can't get it or if you're not comfortable with handing chemicals and fertilizers, you can always call a professional lawn care company to make the applications for you. But, most people can do it themselves as long as they take the time to read and follow the label instructions.

Slow release vs. instant release. The most common types of fertilizers fall into one of these two categories. Slow release fertilizers will slowly break down over time with exposure to moisture, micro-organisms, sunlight, and warmth. These fertilizers are formulated with a capsule surrounding the granule of fertilizer. This capsule will slowly biodegrade as time goes by letting the fertilizer slowly leak out and absorb into the soil around it. The more of the conditions listed above that are present, the fast it will break down. The purpose of a slow release fertilizer is to let the nutrients slowly release to the soil so that the grass uses it as it is needed. This prevents "burning" the grass in warm weather by applying too much fertilizer, or if the temperatures are in the 90's it is too hot for quick release fertilizers. Slow release fertilizers are more expensive than the quick release, but they are usually a higher quality product.

Quick release fertilizers are usually high nitrogen products. Ammonium Nitrate is a common product used for quick green up. We use a lot of it, and there's nothing wrong with using it. Just be careful and don't apply too much at one time. If you apply it when the temperatures are approaching 90, water it in after applying it. This is another advantage of the slow release products, you don't have to worry with watering or what the weather is. An old trick practiced for years by the old timers is to fertilize just before a rain, let nature take care of the watering.

Here's a word on fertilizing yourself. Price the material that it would take to do the job yourself, then call a commercial company to see what they would charge you to do it. In our case, we will often be able to make the applications at or near what the materials would cost to do it yourself. Unless you just want the enjoyment of doing the total lawn maintenance yourself, check and see what it would cost to have it done, it may be cheaper. Basic Schedule: On 3/1 5/1 7/1 9/1 adding weed control as needed. If you happen to be in Northwest Tennessee, around the Paris, TN or West Kentucky area and would like an estimate for this visit our site WWW.LawnMastersLLPC.COM

Weed Control

By definition, a weed is any plant growing in a spot where it is not wanted. So, a fescue plant growing in a stand of Bermuda would be a week, or Bermuda growing in a flower bed is a nightmare, definitely a weed! The weeds we will be looking to control are those that make our lawns look trashy, unkept, rough looking even two days after mowing. Have you ever noticed that after you mow, a couple days go by and the weeds have outgrown the grass and are standing high? They make the lawn look like it needs to be mowed again. If you can keep the weeds under control you will have a smoother looking lawn without ever doing anything to change the actual grade of your lawn. You will have a thicker stand of grass without seeding, because the weeds are competing with the grass for everything that they both need to survive; water, sun, fertilizer, air. When the weeds are gone the grass will grow better and fill in somewhat. Bermuda grass will fill in any holes left behind by the weeds, fescue may need a little more help.

Two types of weeds exist, broadleaf weeds, and grassy weeds. They are pretty self explanatory. The broadleaf weeds have round wide leaves. They grassy weeds look just like a grass plant, they are. It's just a grass plant of a different type growing where we don't want it to. Broadleaf weeds are dandelion, plantain, chickweed, purslane, clover, dock, henbit, oxalis and many others. Grassy weeds are crabgrass, goose grass, barnyard grass, dallies grass, and many others. Since there are two basic types of weeds, they have different genetic make ups, thus it takes two different approaches to kill each. To complicate the weed picture further, there are annual, bi-annual, and perennial weeds in each category. To control each, the application must be made at the proper time and be the proper type of weed control product.

The easiest way to look at what needs to be done in weed control is to follow the time of year you are currently in and follow the instructions for what needs to be sprayed or applied at that time of year. Let's take it step by step.

FIRST APPLICATION OF THE YEAR

This is usually done in spring around the time that Forsythia starts to bloom in your area, which is a good biological clock for when to start your pre-emergent application. This weed control application is to control weeds that will come up later in the spring, it's called a *pre-emergent*, this means before the weed comes up. You will apply either a spray or bagged granules to the lawn in early spring, approximately 30 to 45 days before the weeds would be germinating. Mainly you are trying to control *annual grassy weeds* with this application. Crabgrass, Goose grass and the other grassy weeds listed above. Since these weeds grow each year from seed that was left behind from the last year's plants, it is necessary to control them each year. Once they have germinated and come up it is far harder to control them so you are better off stopping them before they start. Also, the lawn looks better when you have prevented a weed from coming up because you never see it, as opposed to letting the weeds sprout and then killing them. In the later case you will have brown, dying weeds in the lawn after you spray a post emergent weed control product. To make the pre-emergent weed control application, first measure the lawn and know what the area is, (square footage) then decide which of the two methods you will use. Spreading granules with a rotary spreader, or spraying a liquid with a backpack sprayer or maybe a battery operated, tow behind the tractor type sprayer. For most individuals it is going to be far easier to apply the granules. Using these you don't have to have a sprayer , and if you have a very large lawn you would

have to fill up the sprayer several times making the job very difficult, time consuming and aggravating. Most garden centers will have the bagged "weed and feed" products that are easy to use. Follow the directions on each bag since different manufacturers will make their products in different strengths, making the application rates different for each kind. The bags will usually tell you that each bag will cover so many thousand square feet. (this bag covers 5,000 sq. ft.) If you have a 10,000 sq. ft. lawn, you will need two bags of this material. You must spread it evenly over the entire lawn, being sure that you don't apply far too much on the first part of the lawn, and then noticing that you are running out of material, shut the spreader down so it doesn't apply as much to finish. If you do this you have put down twice as much material on the first part as you did the second. This can mean anything from dark green/light green spots, to killing the part that too much was applied to. Most bags of quality material will have directions for where to set the adjustment on most popular spreaders to spread their material. If all else fails, set the spreader to spread very lightly, and start spreading making several passes over the entire lawn until you are through. Just be sure to cover all of the lawn and don't cover some parts much more than others.

The "weed and feed" products are called such because they contain weed control products as well as the proper needed amount of fertilizer. These are very handy since you only have to make one application to handle both chores.

The second application of the year will be another weed and feed type product. The difference is that this time you will be controlling the broadleaf weeds that escaped the previous pre-emergent application. Following the same method described before, apply the material for fertilizing and broadleaf weed control. The application is exactly the same, only the product you are using will be different.

The third, fourth, fifth, and sixth (if you need it) applications are again the same. If you use a product like Scott's, they will have each bag numbered for the application number you need. They make it pretty easy for the average individual. After about a year of this type of program you will be able to tell a huge difference in the looks, thickness and health of the lawn. But don't set back and rest now! Next year, as long as the birds are flying, the wind is blowing, the neighborhood dogs (or your dogs) are roaming around through fields and then through your lawn, and even you. If you walk on someone else's lawn containing weeds and then come back and walk on your own lawn, you will have weed seeds get deposited on your lawn. Since the weed control applications are good for about 6 to 8 weeks each, they will have worn off when next spring rolls around, and these weed seeds that have dropped on your lawn will start to germinate. So the thing to do is plan on an annual basis to keep the level of look you desire in your lawn.

Unusual Weed Control Needs

If you have a mostly Bermuda grass lawn and you have some Fescue growing in it you can control it by spraying the Fescue with Round Up **when the Bermuda is Dormant**. Make certain that there is no greening up taking place in the Bermuda. If you spray it when there is greening up, you will temporarily kill that spot of Bermuda. The best time to attempt this is early spring on a good warm day. The Fescue needs warms temperatures to be actively taking water into its system, and in turn, be able to absorb the weed killer. Fusillade is a commercial Weed control product that will stunt Bermuda.

Bermuda growing in, around and through landscape beds is a difficult thing to deal with, without spraying. The average Bermuda plant will have roots as deep as 5'. So pulling the Bermuda is a waste of time, since it will just grow right back. There is a commercial weed killer for this type situation. It is called Vantage. You can spray it directly over the top of most shrubs, flowers and trees and it will not harm them, but it will kill any grassy weed it comes in contact with. This is great for situations where you have Bermuda growing up and all through a shrub or ground cover where spraying Round Up wouldn't work. Here you can just spray the whole shrub, plant or ground cover and the Vantage will kill the Bermuda (any other grass too) and not harm the plant. You will just have to keep some of this one hand to retreat when the Bermuda creeps back in later in the year.

Mowing, Cutting the Grass, Grooming, etc.

It's called several different things but it is still the most misunderstood part of the total lawn care picture. Far too many people destroy a perfect lawn by improper mowing practices. Mowing is for a specific purpose, more than just to keep the neighbors from complaining. Each time you mow, you encourage the grass to thicken up. Each time you mow you either encourage deep roots in the grass plants or you do the opposite and shorten the roots of the grass, and encourage thick weed growth. It just depends on how you mow.

Each type of grass has its optimum cutting range. This is where the grass will perform best at and encourage thick grass growth and discourage weed growth. Fescue grasses are at the top of the growth and cutting range. They don't call it *Tall Fescue* just for fun. Fescue's grow best and perform best at 2 ½ to 3 ½ inch heights. This may seem tall to you if you're a typical scalper. But if you desire a lush green lawn that looks like a nice golf course rough, you need to follow directions. Fescue will not tolerate low cutting like ½ to 1 inch heights. It cuts the entire grass blade off of the plant, leaving nothing but shoots. The plant cannot make its own food with no leaves, it can't shade out the weeds trying to grow underneath of it with no leaves. Then the plant will die, since it doesn't take that kind of stress well and all of the weeds will start to grown where the grass once was. Some people think that they will set the mower down real low and scalp the lawn, that way they won't have to mow for a couple of weeks. That is very true, and when you do have to mow again all you will be mowing is weeds and dust, because this practice will kill a Fescue lawn very quickly. If this describes you, change your mowing habits before you decide to renovate your lawn and spend any money on it. A brand new sodded, several thousand dollar invested, several hours of work spent on it lawn, will go right back to where it was, if it's not mowed properly.

So get the mower out, set it on the garage floor, and measure with a ruler how high the blades are off of the floor. Find a spot where they are 2 ½ to 3 ½ inches from the floor and make a note where the lever is set. Usually the numbers on the adjustment levers that adjust how high you are cutting are not representations of inches, just numbers. It might as well say "high" "med" and "low". Now that your height is set, you're ready, right? Wrong. Take the blades off and sharpen them, if they are worn very severe, replace them. Worn blades sometimes leave a trace of uncut grass standing between the blades, or they will push the grass over and rip it instead of cutting it cleanly. If you have ever noticed your lawn having a brown tinge to it after it has been cut, you needed to sharpen the blades. Sharp blades are even more important on newly seeded or sodded lawns. Now, we have sharpened or new blades, we are ready. But before you go, have you ever noticed your lawn mower leaving grass cut too high or too low on one side? While measuring the height of the blade, measure the height of each side of the deck. If they are not the same, adjust it until it is level. The front to back tilt should be just slightly lower in front than the back. Now that all of that is done, start mowing.

Are you one of those that goes round and round in circles? Or after outlining the property you just follow the same pattern until the lawn is cut up in sections? Look at how the commercial lawn cutters cut grass in your neighborhood. They will make a straight cut on the longest straight edge, and then cut in alternating directions each pass, always in a straight line. This alone will make your lawn look better, even if you don't do anything else. This method will also double cut the grass clippings leaving a smoother looking cut without grass cuttings piled up. Just cut the grass often enough that

you don't have grass piling up outside of the discharge chute. The rule of thumb used to tell when you need to cut is: never cut more than one third of the grass blade off at one cutting. Remember, the more often you cut the grass, the better the lawn will look and the healthier the grass will be.

MOWING WARM SEASON GRASSES

Warm season grasses like Bermuda, Zoysia, Centipede, and St. Augustine can withstand a lower mowing height than the cool season grasses like Fescue. Gold courses routinely use Bermuda and Zoysia in the fairways and they will cut it at ¾ inch, sometimes less. Bermuda has been used quite a lot on greens, and if you have ever played gold, you know that the greens are kept quite low. In your own home lawn the

determining factor as to how low you can cut the grass will be the grade of the lawn, or how smooth it is. If you have a very rough lawn and try to cut the grass low, you will have uneven spots and scalps, these cause the whole lawn to look bad. In this case all you can do is find the low spots or dips and fill them in to allow you a smoother cut. Bermuda in a home lawn is kept nice at 1 inch. Zoysia about the same to slightly higher, again it depends on how rough the lawn is. These grasses thrive on this height of cut, and will spread faster when cut low. The faster and thicker it spreads the less chance weeds have of getting a start. Again, the more often you cut the grass, the thicker it will be and will look better.

Mowing patterns have a lot to do with the appearance of a lawn. Have you ever noticed the patterns on a gold course or a baseball field? These are done by mowing in different directions. The darker looking grass has been mowed toward you, the lighter has been mowed away from you. You can do this to some extent on your own lawn. Just mow back and forth in straight lines trying to keep very straight lines, depending on the type of mower you have, you will have some stripes. The more suction, and the cleaner the cut your mower gives, the striping will be better.

After you get the straight line cutting down pat, it's time to start changing things up. Alternate every other week mowing in a different direction. This will give a checker board pattern, if the previous weeks stripes are still showing. Mowing in different directions will do a couple of things, first it provides a little interest in changing the look of the lawn each week. The second is that if you mow the same pattern week after week, you eventually engrave your mower tire tracks into the lawn causing compaction and just another problem. Change it up, your lawn will look better and you will like the look of it more.

The type of mower you use will effect how you mow also. If you use a mulching mower you should mow very frequently, this type of mower cuts and re-cuts the grass clippings until they are so fine they fall down between the grass blades. If you try to cut the lawn when the grass is too tall, the grass clippings will pile up and not get mulched.

Watering, Irrigation and Sprinklers

It's all the same thing, watering when the grass needs it. This is another sore spot with me and some customers. They will spend hundreds or even thousands of dollars on the lawn, and then they refuse to water. Or my favorite, they will water just enough to dampen the surface of the soil then stop, and only do that once after they have been told to water every day, even two to three times per day. When their new grass fails they want to put the blame on someone other than themselves. There are two basic types of watering that will be needed through the year. One is for establishment, the other is for maintenance or providing a little help for mother nature.

Establishment watering is done after you have seeded or sodded. A lot of water is needed in frequent spurts, the more often the better and you don't have to water very deeply. Just the opposite of what you will do after the grass is up and summer is here. First, after you have established a new lawn, start watering immediately. Don't wait for the rain to come. You need the straw and seed to get very wet slowly by watering first before a strong rain comes. When a down pour comes on new grass seed or dry straw, it

will often get washed away, because it hasn't had time to get moist and attach itself to the soil. Water as often as you can on a new lawn until the grass is about ready to mow, then stop watering to allow the ground to dry up so you can mow without causing damage to the soft soil. After you mow it, start watering again, except now you will only water once per day, in the morning (never at night) for a longer period of time for each watering. You need to water long enough to soak the soil to a depth of about 6 inches. This may take as long as an hour. The next change is that you won't water every day now, only when the grass needs it. If it rains once a week and the grass doesn't show signs of stress, then you won't have to water. The new grass will start to get a wilted look to it when it's needing water. It should be easy enough to spot. You can find a variety of sprinklers and irrigation products on our website at WWW.LawnmastersLLPC.COM

Maintenance watering is done throughout the rest of the year. A rule of thumb for watering is to water infrequently, and deeply. The grass will need 1 to 2 inches a week of rainfall or watering. If you have Fescue, you will need the higher amount of water, also it will depend on if your lawn is in the shade or sunny, as to how fast it will dry out. You can't use a book as a plan to follow here, just use common sense and the grass will tell you when it needs a drink. If you don't know how much your watering system puts out in a certain amount of time, put some catch pans out and time it to see how long it takes to water ½ inch. Then if you need to apply 1 inch, just double that amount of run time. Some hard clay soils won't absorb water very quickly, if you have this type of soil you may have to water for a shorter amount of time in one spot, move to another, then another, and rotate around the lawn two or three times to apply the needed amount of water. Again, do not water at night. I know this is when most of you have the most amount of time, if you work during the day, but it is a harmful practice. Watering after the sun goes down leaves the grass blades wet for a long period of time. This combined with high humidity, will lead to fungus getting started on the grass. If you have never dealt with a fungus like Summer Patch, Dollar Sport, or Brown Patch, you don't want to. It can completely kill a lawn from one side to the other in under a week's time. What is needed for a fungus to get started is high heat, humidity, moisture, an airborne pathogen, and of course the grass which is the host. The symptoms are similar to lack of water. The grass will start to turn a straw colored brown as it dies. It will be in irregular round spots across the lawn, usually starting in the direct sun. The spots will have a moldy halo around the outside ring of the spot, this is the fungus that is traveling from where it started in the center, to as far as it can go. New young Fescue is the favorite grass for these funguses, although they will infect other grasses. The best cure for fungus is prevention.

1) Do not water at night
2) Keep the grass cut regularly, to help air circulation
3) Don't let grass clippings build up noticeably on the lawn
4) Plant a variety of grass that is resistant to fungus
5) Do not use excess nitrogen (too much fertilizer)
6) Spray the lawn with a preventative fungicide, systemic when conditions are right.

Conditions are right for fungus to start when the heat levels stay high at night and the humidity levels are high. Prolonged rainfall or excess watering will also increase the problem. In areas of the US where humidity is not a problem, then fungus isn't as much of a problem. From Kentucky south, it is a huge problem. Keep an eye out for it when your new grass is up and looking great, it only takes a few days for it to go bad.

Other Maintenance Items Needed

After all of these basic maintenance items discussed so far have been done, there are a few other items that will need to be done from time to time. These are no less important, but for some people, depending on where you live and what type grass you have in your lawn, may not have to perform these tasks very often.

***Lime Application –** This is an important item to take care of. Lime acts as a helper for the fertilizer and weed control products that you will put down over the course of the year. Lime will help the fertilizer work better, and it will help the weed killer work better. When the Ph of the soil gets to far acidic, which is the direction it normally goes, the soil has to be "sweetened". This is done by adding lime. Ph testers can be bought very cheap, and will do a good job of testing the Ph of the soil. Then, depending on the type of lime you are using, you will have to add the required amount of lime to get the soil Ph to neutral. We prefer to use the granule or palletized lime. It is called Dolomitic lime. It is easy to spread in the average rotary spreader, easier to handle since it is in 40# bags, and doesn't make near the mess that regular ground Ag lime does. Another bonus is that the Dolomitic lime goes to work faster. Ag lime will take as much as 6 months to start to change the soil Ph. Dolomitic lime will start within 1 month. The meter that we use to test Ph tests in ½ point increments, as most do. For each ½ point off of neutral we are, we apply one 40# bag of Dolomitic lime per thousand square feet. So if you are one full point on the acid side of neutral, and you have a 10,000 square foot lawn, you would need 20 bags of lime to give the dosage the soil needs. Sometimes you will have a lawn that has a severely acid condition, being as much as 2 or 3 points off. In this case, you cannot put down all of the lime at one time, since it would require such a high dose. In the same case it could take as many as 40 to 60 bags. When these conditions arise, you have to put down the required amount in 2 to 3 does. The reason for this is that the ground will not absorb that much lime at one time, and if a lot of rain comes it will just be washed away.

After the initial lime application is put down to cure the acid soil, you should apply a light dose once a year in the fall. Lime leaches out of the soil very fast and will become deficient in a year. A good practice is to use the Ph meter each fall and apply according to that, but If you don't buy a meter you can use a general rule of thumb of applying 50# per 2,000 square feet for an annual "booster" shot.

***Aerating –** Aerating loosens the soil, provides a place for fertilizer, lime, air and water to go into the soil. This is something that should be done at least once a year. The best time to do it is in the fall, however anytime of the year is OK. If you are going to apply granule weed and feed products, or lime you could aerate before each application. This allows the granules a place to get into the soil directly instead of having to wait for watering or rainfall to carry it into the soil. A core aerator is the best type of aerator to use. This type pulls a plug of soil out and deposits it on the surface letting it decompose over time. This loosens the soil and helps to reduce thatch. The other type of aerator that has little spikes on it simply pushes the soil down and to the sides, compacting the soil worse. They will help in driving seeds down into the soil after seeding, but if you are

going to go out and buy an aerator, spend a little extra and get a good heavy duty core aerator, you will be using it several times over the year and will be a valuable tool for you.

***Dethatching –** Dethatching needs to be done only when the thatch level becomes a problem. The equipment used to dethatch can do as much damage as good to a lawn if it is not used properly, so use caution and be certain that you know what your doing with a

dethatcher, especially the power thatchers, if set at a level that is too low, it will rip up grass plants and leave the ground bare. To determine if in fact you need to dethatch, look under the grass plant right on the surface of the ground. If you can see soil in most spots, you do not need to dethatch. If you see a layer of what looks like crusted, hard grass clippings this is the thatch layer. In most cases if it is ½ inch thick, that is too much, you will need to dethatch. Run the dethatcher at a level that just takes the thatch out, don't let the machine cut into the soil. After making a pass across the lawn the machine will bring lots of thatch to the surface. It will look like grass clippings. There can be a huge amount of thatch to dispose of, so plan ahead and be read to rake it up, haul it off or do something with it.

After tackling the process of establishing a lawn, be proud of it, it's a lot of work. But remember not to lose sight of where you were and how far you have come. It's also a good idea to take pictures of the lawn along the way as you progress through the phases, it will tell you how far you have come.

Enjoy the process of renovating your lawn it will be a good source of stress relief when you can take your time on a nice sunny afternoon and cut the grass, water or just frolic in the lawn with the kids. If you have any problems achieving the desired results your after, email me with a description of the problem and what you have tried so far to correct the problem and I will try to help you through it.

GOOD LUCK & HAPPY GROWING!!

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