



# Customer Care Booklet

(910) 796-1166



## Newly Planted Sod

Newly planted sod is successfully installed year around. In the summer, we install the sod within 36 hours after delivery. New lawns need water, water, and more water. Drench your soil thoroughly the first 2-3 weeks, watering 2-3 times daily. Stay off your grass during this time or the lawn will be lumpy. Pay close attention to the grass along sidewalks and drives because concrete and asphalt heat up during sunny days, causing these areas to dry out more quickly. After about two weeks of heavy watering, roots begin to develop. You can then slowly wean your new lawn to normal schedule. Sprinkle sand in any wide seams to encourage running-type grasses to grow together. You can sprinkle sand on top to fill in any uneven or low spots. The first time you cut your new grass cut it high to make sure you don't scalp it. This can be done as soon as the lawn needs mowing.

## Mowing

Proper mowing height and frequency go a long way towards preventing heavy weed infestation and encouraging a deeper, stronger root system. A general rule for mowing is to never take off more than one-third of the grass blade with any one mowing. If rainy weather makes it impossible to mow regularly, then reset the mower for the initial cutting and gradually lower to the proper height. With shady conditions, increase the height of cut. More frequent mowing will stimulate root growth, thus developing a thicker, healthier lawn. Mow your sod as it needs mowing, even if it is one week after installation, and always keep your mower blade sharp. A torn blade of grass is more susceptible to insect and disease problems. Mow when lawn is dry to allow for better distribution of the clippings. Do not bag the lawn clippings. Grass clippings are 75-85% water and a good source of nutrients. When left on the lawn, they quickly decompose and release valuable nutrients. This may reduce the need for fertilizer by 20% to 30%.

**Centipede: 1" to 1.5" mowing height @ 7 to 10 day intervals**

**St. Augustine: 3." to 4" mowing height @ 7 to 10 day intervals**

**Zoysia: 1" to 1.25" mowing height @ 5 to 7 day intervals**

**Bermuda: 1" to 1.25" mowing height @ 5 to 7 day intervals**

## Watering

Over-watering of lawns results in waste, added cost and encourages disease and shallow root growth. What every landscape needs is a gentle rain every couple of days. When sod is first installed, keep it moist with daily watering until it is well knitted down. In the summer this may take up to two weeks. The best time to water is in the morning from 5 am to 10 am to reduce disease and water loss through evaporation. In the summer for the first 2 weeks, a mid-afternoon 10-minute watering may be needed to keep sod moist. After this, reduce the frequency of watering every other day and then to every third day allowing your lawn to dry out totally. Check sprinklers periodically to see that they are functioning properly.



## Weed Control

Many times, weeds in the lawn exist and thrive because of improper watering, mowing, and fertilization. A healthy turf is the best defense against the infestation of weeds. Weeds compete with the grass for light, water, and nutrients. In weakened or poor-growing lawns, the door is wide open to weeds! Some weeds growing in small areas may be controlled by hand weeding or by using a small hoe, rake, or shovel. Other hard to control weeds may need herbicide. There are two types of herbicide, pre-emergence and post-emergence. A pre-emergence herbicide is used to prevent weeds from becoming established. The disadvantage of a pre-emergence herbicide is that it is used before you are sure it is needed, which can lead to waste and unnecessary expense. A post-emergence herbicide can be used on an as needed basis which allows for spot spraying or treating only where weeds are actually present. Do not apply any herbicides for two months after installation. The weed needs to be identified in order to select the appropriate herbicide.



*Carefully read and follow all directions and precautions on the herbicide label. Herbicides that are labeled for use on one type of grass may severely injure or kill another type of grass.*

*Remember...a weed is simply a plant that is growing where it is not wanted!*

# Disease Control

Diseases are a problem with all of the warm season grasses during the summer when the conditions are favorable. These conditions are humidity, night time temperatures in excess of 70 degrees, excessive moisture (thunderstorms, evening irrigation), high thatch content and too much Nitrogen. Best management practices that support a healthy lawn such as proper fertilization, mowing heights, and timely watering (avoid late evening and excessive watering) can prevent or limit lawn injury by diseases. Grass that has been weakened or damaged during the growing season is susceptible to winter injury. Inspect your lawn frequently to detect disease early. Be sure to correctly identify the disease and choose the proper fungicide, follow label instructions, and apply it at the correct rates and times.

## *Fungicide Tips:*

- ◆ Inspect your lawn frequently to detect disease early.
- ◆ Correctly identify the disease. Insect damage often displays symptoms that resemble disease. Contact your Cooperative Extension Service if you are unsure of the diagnosis.
- ◆ Select the proper fungicide, follow label directions, and apply it at the correct rates and times.

## *Types of Diseases:*

- ◆ **Brown Patch**: Brown Patch is a fungus-type disease that is prevalent here in the summer and early fall. Begins in April, with an increase in May and a small decrease in June. Circular brown areas caused by cool, wet weather. Most prevalent in St. Augustine, Centipede, and sometimes hybrid Bermuda. Provide good drainage and avoid excessive nitrogen fertilization.
- ◆ **Centipede Decline**: Circular dead areas beginning in April and increasing through May and June then decreasing throughout July-Sept. Caused by high nitrogen content, cold and dry weather. Avoid excessive rates of nitrogen and phosphorus. Avoid drought stress.
- ◆ **Dollar Spot**: Straw-colored patches 2 to 6 inches in diameter in late summer with increasing instances in May through June. Caused by wet weather, heavy dew and low nitrogen.

Most prevalent in Bermuda, Centipede, and Zoysia. Adequate fertilizer and irrigation will help lawn recover.

- ◆ **Gray Leaf Spot**: Dark, circular shaped lesions on grass blades. Common in the summer months but can have occurrences beginning in April-May and increasing through June. Caused by warm, wet weather and high nitrogen. Most prevalent in St. Augustine. Fertilize properly and avoid close mowing. Water deep, but infrequently.
- ◆ **Fairy Rings**: Large rings of very green grass, dead grass, or mushrooms, or a combination of all. Remove thatch, limit organic matter, flush with water and avoid overfertilization.
- ◆ **Slime Mold**: White, powdery covering on leaves in patches during warm, wet weather. Remove by mowing or washing the lawn. Molds are not considered harmful and do not require treatment with a fungicide.





# Insect Control

Pesticides are just one of many tools available in combating the harmful effects of insects. Proper watering, mowing, and fertilization reduce insect damage. Maintaining a healthy lawn also provides a habitat for beneficial organisms that help control insects. There are numerous insects that thrive in this area and can cause serious damage to your turf. Some of the frequently found insects in the soil and turf are Mole Crickets, Chinch Bugs, Spittlebugs, Ground Pearls, Fall Army Worms, Cutworms, Sod Webworms, and Leafhoppers. Insect damage can first be seen with a general weakening of the grass and irregular yellowing. If insects are suspected, the species need to be identified. If pesticides are needed, take the following precautions to reduce the potential of contaminating surface or groundwater:

- ◆ Correctly identify the insect problem. Your Cooperative Extension Service can help.
- ◆ Make sure the insect population is bad enough to warrant pesticide use.
- ◆ Make sure the insect you are after is listed on the pesticide label and that the pesticide is approved for use on your lawn grass.
- ◆ Plan to treat the insect when it is most susceptible and the grass is most tolerant.
- ◆ Follow all label directions to apply the pesticide at the correct rate and time.

## *Types of Insects:*

- ◆ **Chinch Bugs:** A serious pest of St. Augustine in the eastern part of North Carolina. The nymphs and adults are present beginning in and most effective mid-June through mid-September.
- ◆ **Cutworms:** The most common for this area being the black cutworm begins to appear in mid-March and will continue throughout mid-November. They are best-controlled mid-April through mid-September.
- ◆ **Mole Crickets:** These pests become active in March and lay their eggs in the spring. They are most effectively controlled soon after and on a consistent basis.

- ◆ **Bees, Wasps, Yellow Jackets:** These insects occasionally damage turf grass by digging up the soil, making holes, or forming mounds. One effective management strategy is to maintain a thick, lush stand of turf and to replenish mulch to keep a minimum on the bare soil areas where the insects prefer to build nests.





## Lawn Fertilization

Fertilizers should be applied uniformly and with care. Apply half the fertilizer in one direction, and the other half moving at right angles to the first pass to ensure complete and uniform coverage. Irrigate or water your lawn immediately after fertilizing. It is important to get a free soil analysis from the NC Extension Service to determine your pH and nutrient levels in your soils. A low pH will not let nutrients be available to your lawn, and lime may need to be incorporated. Excessive Nitrogen applied during the hot summer months is risky as it may promote disease, damaging your grass, which then sets the stage for winter injury or kill. In general, apply the heaviest application of fertilizer in the spring (10#/1,000 sq.ft.) and then "spoon feed" through the summer (2-3#/1,000 sq.ft.). Do not apply any fertilizers with Nitrogen to Centipede after July 15<sup>th</sup>. A fall application of Potassium (0:0:32 or 0:0:60) is beneficial in improving winter hardiness for all warm season grasses. Three primary nutrients that are needed by plants in the greatest amounts are nitrogen, phosphorus, and potassium. Nitrogen encourages leaf and stem development. Phosphorus stimulates the root system. Potassium helps plants produce sizable flowers and fruits. When the soil supply of these nutrients is exhausted, the impact on plant growth is great. Depletion can happen quickly as plants absorb the nutrients and, in the case of nitrogen and potassium, water leaches them away.

- **Centipede - 5:0:15, 5:5:15 or 5:10:15 (apply spring only- Centipede does not like nitrogen), the true color of centipede is "apple-green".**
- **St. Augustine - 16:4:8 spring application and then "spoon feed" with moderation**
- **Zoysia - 16:4:8 spring application and then "spoon feed" lightly**
- **Bermudas - 16:4:8 spring application and then "spoon feed" as needed**

# Testing Your Soil

To determine soil pH and nutrient requirements, a simple soil test is all you need. It is a free service offered to you by your New Hanover County Cooperative Extension Service. Stop by for soil boxes and instructions.

## Soil pH

Soil pH is an indicator of soil acidity. Nearly all soils in North Carolina are naturally acidic because our rainfall leaches and depletes nutrients. Strong acidity or alkalinity also slows down the rate at which organic matter decomposes into usable nutrients and taxes a plant's root system by causing them to work harder to absorb the nutrients.

### *Taking a soil sample:*

1. Break your landscape down into as many different areas as you like (for example: front yard, back yard, garden, perennial bed, etc.). Pick up a soil sample box and information sheet for each area you want to have analyzed.
2. Use a clean plastic bucket or container to collect the soil. Metal containers will contaminate the soil with elements, such as zinc and copper, and give misleading results.
3. Collect soil samples when soil is dry.
4. Take each sample at a depth of about 4 inches.
5. Collect samples from several locations and mix them together to produce a composite sample for each area you are sampling.
6. Thoroughly mix the soil samples for a specific area, and fill the North Carolina Department of Agriculture sample box two-thirds full.
7. Label the box with the code you have assigned to the sample area.
8. Directions for filling out the soil information sheet are on the back of the form. To get the most value from your soil test, take the time to fill in the blanks completely.
9. If you need assistance in filling out the form, or interpreting the test results, consult your Cooperative Extension Service.

# Mulching in Southern Climates

Mulching the soil around your plants will save you time and effort in your landscape and reward you with healthier plants. Mulch discourages weed growth, protects plant roots from extreme temperature changes and helps retain soil moisture.

## *Types of Mulch:*

- ◆ **Organic Mulches:** These mulches decompose over time and release nutrients into the soil.
- ◆ **Pine Needles:** Attractive; suppresses weeds; acidic.
- ◆ **Bark Chunks:** Attractive; long-lasting; can be turned into soil as an amendment.
- ◆ **Woodchips:** Attractive; long-lasting; cools soil and retains water.
- ◆ **Leaves:** Adds nutrients. Shred before use.
- ◆ **Compost:** Adds nutrients; warms soil.
- ◆ **Grass Clippings:** Decomposes quickly. Compost or dry before use. Use caution if using clippings from a lawn treated with weedkillers.
- ◆ **Manure:** Rich in organic matter; must be well rotted; may contain weeds.





## Overseeding

Overseeding is the practice of planting and maintaining an annual cool season grass in an established perennial warm season lawn. Now that the weather is warming up, the Rye or Fescue will begin to die out. It is important to help this process along to ensure a healthy lawn of the selected warm-season grass. If it is OS-Bermuda, **increase** mowing frequency and **decrease** the mowing height in order to get more light to the emerging Bermuda leaves. Decrease the cut height early, not after the Bermuda has already grown tall. **Do not** suddenly reduce the cut height after the Bermuda is growing early on. The Bermuda is struggling for survival and a sudden cut in height reduction is sure to "shock" it. When the ryegrass begins to thin out, fertilize generously.

Centipede that is over-seeded with Fescue is handled a lot differently. Don't be in a hurry to get rid of the Fescue. As the weather warms and turns hot, water it often to help the Fescue stay green (it can die in just one dry, hot afternoon). The ideal "transition" is for the Centipede to remain suppressed by the Fescue until the Centipede can get a few leaves up to where they can get sunlight. A sudden, large decrease in mowing height can "shock" the Centipede almost as much as it does the Fescue, in which event both grasses are brown and the lawn is opened to weed invasion. You should provide management that favors Centipede. It is likely to enable a good Centipede lawn to emerge from several months of suppression by the Fescue, largely by gradually reducing the height of mowing to 1"-1 ½" as the weather gets progressively warmer.



# Bermuda Grass

All Bermudas thrive in hot weather and grow rapidly, creeping into flower beds and sidewalks. Bermuda tolerates a wide range of soil conditions and fertility but it will not tolerate shade or poorly drained soil.

Common Bermuda can be maintained at a higher mowing height than hybrid Bermuda. Common Bermuda produces a more open lawn, has a wider leaf, is more prone to weed infestation, is less cold tolerant, requires less maintenance, and exhibits more seedhead growth.

Tifway (T-419) and Tifway II are the best all-purpose Bermuda grass hybrids for use in lawns. They may require more frequent mowing and fertilization than common Bermuda.

The “secret” of a high quality Bermuda lawn is in the mowing. Properly fertilized, cultivated, and mowed, a Bermuda lawn can be exceptional. Frequent mowing at the correct height increases the density of the lawn.

A healthy, vigorous Bermuda lawn requires frequent fertilization. During the growing season, fertilize every 4 to 6 weeks after green-up in the Spring and stop fertilization 6 weeks before the first frost.

## ***Summary of Characteristics***

- ◆ Dark green color.
- ◆ Repairs itself very quickly.
- ◆ High maintenance and fertility requirements.
- ◆ Creeps quickly into flower beds and sidewalks.
- ◆ Requires full sun, does not tolerate shade.
- ◆ Drought and insect resistant.

## **Bermuda Grass in the Spring**

**Fertilization:** Apply 1 pound of nitrogen per 1,000 square feet using 8.3 pounds of 12-4-8 or 6.25 pounds of 16-4-8 in May or 2 weeks after green up, whichever is last.

**Aeration:** Consider soil texture. Heavily compacted areas may benefit from core aeration. Wait until April or May when lawn has come out of dormancy and is actively growing.

Thatch Control: Recommended if thatch layer is more than ½ inch thick. Use a power rake and mow vertically, in one direction.

Soil Amendment: Amend as recommended by a soil test.

Renovation: Replant large, bare areas using sod or sprigs.

Weed Control: If needed, apply post emergence herbicides in May when grass weeds are actively growing. Always follow label directions and use with caution...be sure the product is labeled for use on Bermuda grass.

Disease and Insect Control: Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Mowing height: Common – 1-1 ½ ". Hybrid – ¾ - 1 ¼ ". Mow at 7 day intervals. Use reel mower, or a rotary mower set as low as possible without scalping.

### **Bermuda Grass in the Summer**

Fertilization: "Spoon feed" through the summer by applying 1 pound of nitrogen per 1,000 square feet using 12-4-8 or 16-4-8 every 4 to 6 weeks. (See Fertilization for information on determining fertilization rates.)

Aeration: See Spring Recommendations.

Thatch Control: See Spring Recommendations.

Soil Amendment: Amend as recommended by a soil test.

Renovation: Replant large, bare areas using sod or sprigs.

Weed Control: Apply postemergence herbicides as needed. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress. Always follow label directions and use with caution.



*Disease and Insect Control:* Treat as needed. Be on the lookout for mole crickets; the young will be hatching June through August. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide, and always follow label directions and use with caution.

*Watering:* Water to prevent excess drought.

*Mowing:* Mowing height: Common – 1-1 1/2 ". Hybrid – 3/4-1 1/4". Mow at 7 day intervals. Use reel mower, or a rotary mower set as low as possible without scalping.

### **Bermuda Grass in the Fall**

*Fertilization:* Apply 1/2 pound of nitrogen per 1,000 square feet using 5-10-30 in September, 4 to 6 weeks before the first frost. (See Fertilization for information on determining fertilization rates.)

*Aeration:* Do not aerate at this time.

*Thatch Control:* Check for thatch in early September. If thatch layer is 1/2" thick, plan to dethatch next spring shortly after green-up.

*Soil Amendment:* Amend as recommended by a soil test.

*Overseeding:* If desired, use 4-8 pounds per 1,000 square feet of annual or perennial rye grass.

*Weed Control:* Apply herbicides as needed. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress. Always follow label directions and use with caution.

*Disease and Insect Control:* Treat as needed. Fall is the last time you can successfully treat mole crickets before next summer. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide, and always follow label directions and use with caution.

*Watering:* Water to prevent excess drought.

*Height:* Raise by 1/2" as winter approaches.

## **Bermuda Grass in the Winter**

Soil Sample: Submit soil samples for analysis every 2 to 3 years to determine nutrient requirements of your lawn. Contact your Cooperative Extension Service for details.

Fertilization: For overseeded Bermuda grass, apply ½ pound nitrogen per 1,000 square feet using 12-4-8 or 16-4-8 per 1,000 square feet in December and February. No fertilization is necessary for lawns that are not overseeded.

Aeration: No not aerate at this time.

Thatch Control: Do not thatch at this time.

Soil Amendment: Amend as recommended by a soil test.

Weed Control: Apply broadleaf herbicides as needed. Do not apply herbicides if grass is suffering from drought stress. Always follow label directions and use with caution.

Watering: Water only to prevent excess dehydration.

Mowing: Clear lawn of debris. Mow overseeded grass at 1" height.



# Centipede Grass

Centipede grass is one of the most popular grasses in Southeastern North Carolina. Introduced in 1919 from southern China, Centipede grass lawns have found widespread acceptance by home owners in the coastal Carolinas. Improper maintenance kills more Centipede grass lawns than all other lawn problems combined. Over fertilized Centipede grass is short-lived and is prone to disease and insect problems.

Healthy Centipede grass is pale to medium green in color. Dark green Centipede usually indicates that the lawn is being over fertilized. The leaf blades of Centipede are intermediate in size. A healthy Centipede grass lawn is not especially dense when compared to other grass types.

## Centipede Grass in the Spring

Fertilization: Apply  $\frac{1}{2}$  pound of nitrogen per 1,000 square feet using 5-5-15 or 5-0-15, in mid-May or early June. (See fertilization page for information on determining fertilization rates.)

Aeration: Consider the soil texture. Heavily compacted areas may benefit from aeration. Wait until May when lawn has come out of dormancy and is actively growing.

Thatch Control: Recommended if thatch layer is  $\frac{3}{4}$  inch thick. Use a power rake with a 2 to 3 inch blade spacing set  $\frac{1}{4}$  inch deep in one direction.

Soil Amendment: Amend as recommended by a soil test.

Renovation: Replant large bare areas in May using sod, seed, or sprigs. Keep seeded areas moist with light, frequent sprinklings.

Weed Control: Apply postemergent herbicide in May as needed. Do not apply until at least 3 weeks after grass has broken dormancy, when grass and weeds are actively growing. Always follow label



directions and use with caution. Centipede is sensitive to certain herbicides.

*Disease and Insect Control:* Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions, and use with caution.

*Watering:* Water to prevent excess drought.

*Mowing:* First mowing height: 1". Regular height: 1" to 1 ½". Follow the "1/3 Rule". Mow at 7 to 10 day intervals.

### **Centipede Grass in the Summer**

*Fertilization:* Apply ½ pound of nitrogen per 1,000 square feet using 10 pounds of 5-5-15 or 5-0-15 in early June if you did not do it in May. (See Fertilization for information on determining fertilization rates.)

*Aeration:* Consider the soil texture. Heavily compacted areas may benefit from aeration.

*Thatch Control:* Recommended if thatch layer is ¾ inch thick. Use a power rake with a 2 to 3 inch blade spacing set ¼ inch deep in one direction.

*Weed Control:* Apply postemergent herbicides as needed. Always follow label directions and use with caution...Centipede grass is sensitive to certain herbicides. Do not apply herbicides if grass is suffering from drought stress.

*Disease and Insect Control:* Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions, and use with caution.

*Soil Amendment:* Amend as recommended by a soil test.

*Watering:* Water to prevent excess drought.

*Mowing:* Height: 1" to 1 ½". Follow the "1/3 Rule". Mow at 7 to 10 day intervals.

## **Centipede Grass in the Fall**

Fertilization: Apply potash in September using 5 pounds of 0-0-22, or 2 pounds of 0-0-54, or 1.7 pounds 0-0-60 per 1,000 square feet. This will improve the lawn's root system and winter hardiness. (See Fertilization for information on determining fertilization rates.)

Aeration: Not recommended at this time.

Thatch Control: Not recommended at this time.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended.

Disease and Insect Control: Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions, and use with caution.

Mowing: Raise height to 1 ½" before first frost. Follow the "1/3 Rule". Mow at 7 to 10 day intervals.

Watering: Water to prevent drought.

## **Centipede Grass in the Winter**

Soil Sample: Submit soil samples for analysis every 2 to 3 years to determine nutrient requirements of your lawn. Contact your Cooperative Extension Service for details.

Fertilization: Do not fertilize at this time.

Aeration: Not recommended at this time.

Thatch Control: Not recommended at this time.

Soil Amendment: Amend as recommended by a soil test.

Weed Control: Apply broadleaf herbicides as needed. Always follow label directions and use with caution...Centipede grass is sensitive to certain herbicides. Do not apply herbicides if grass is suffering from drought stress.

Watering: Water only to prevent excess dehydration.

Mowing: Clear lawn of debris. Clean mower before storing. Now is a good time to get your mower blade sharpened and ready for spring.



# Mixed Grass Lawns

A mixed lawn has two or more species of established perennial grasses. Warm season grasses are difficult but not impossible to maintain in mixed stands. Due to different fertilizer, mowing height, and maintenance requirements of various warm season grasses, a specific regime will favor the dominance of one species over the other.

Weed control in mixed lawns can be difficult since most herbicides are labeled to be used with certain grass species. A desirable grass may be killed or injured by an herbicide along with the targeted weeds.

If you want to reduce the diversity of grass species in your lawn, manage for the grass you want to grow. Be adjusting fertility, soil pH and mowing heights, you can encourage the type of grass you may desire.

## **Recommended Mowing Heights according to predominate grass type**

- ◆ Centipede: 1" to 1 ½"
- ◆ St. Augustine: 2 ½" to 3 ½"
- ◆ Bermuda: 1" to 1 ½"
- ◆ Zoysia: ¾" to 2"

## **Mixed Grasses in the Spring**

*Fertilization:* Apply ½ pound of nitrogen per 1,000 square feet using 16-4-8 in May. (See Fertilization for information on determining fertilization rates.)

*Aeration:* Consider soil texture. Heavily compacted areas may benefit from core aeration. Wait until May when lawn has come out of dormancy and is actively growing.

*Thatch Control:* Recommended if thatch layer is more than ½ inch thick. Use a power rake and mow vertically, in one direction.

*Soil Amendment:* Amend as recommended by a soil test.

*Weed Control:* Apply herbicides for broadleaf and sedge weeds as needed. Always follow label directions and use with caution.

*Disease and Insect Control:* Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to



use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Mowing height: Use the mowing height of predominate grass. Follow the "1/3 Rule". Mow at 7 to 10 day intervals.

### **Mixed Grasses in the Summer**

Fertilization: Apply ½ pound of nitrogen per 1,000 square feet using 16-4-8 in June, July and August. (See Fertilization for information on determining fertilization rates.)

Aeration: See Spring Recommendations.

Thatch Control: See Spring Recommendations.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended at this time.

Weed Control: Apply postemergent herbicides for broadleaf weeds as needed. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress. Always follow label directions and use with caution.

Disease and Insect Control: Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Mowing height: Use mowing height of predominate grass. Follow the "13/ Rule". Mow at 7 to 10 day intervals.

### **Mixed Grasses in the Fall**

Fertilization: Not recommended at this time.

Aeration: Do not aerate at this time.

Thatch Control: Check for thatch in early September. If thatch layer is ½" thick, plan to dethatch next spring shortly after greenup.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended unless Bermuda is the predominant grass.

Weed Control: Apply herbicides as needed. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress. Always follow label directions and use with caution.

Disease and Insect Control: Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Mowing height: Use mowing height of predominate grass. Follow the "1/3 Rule". Mow at 5 to 7 day intervals.

### **Mixed Grasses in the Winter**

Soil Sample: Submit soil samples for analysis every 2 to 3 years to determine nutrient requirements of your lawn. Contact your Cooperative Extension Service for details.

Fertilization: Do not fertilize at this time.

Aeration: Do not aerate at this time.

Thatch Control: Do not dethatch at this time.

Soil Amendment: Amend as recommended by a soil test.

Weed Control: Apply broadleaf herbicides as needed. Always follow label directions and use with caution. Do not apply herbicides if grass is suffering from drought stress.

Watering: Water only to prevent excess dehydration.

Mowing: Clear lawn of debris.  
Mow overseeded grass to 1" height.



## **St. Augustine Grass**

St. Augustine is one of the most shade tolerant, warm season grasses in eastern North Carolina. Properly managed, St. Augustine will produce a fast growing, dense lawn of medium to dark green color and coarse leaf texture.

St. Augustine grows best in fertile, well-drained soil. It grows beautifully in the sun but also has excellent tolerance to shade, salt spray, heat, and drought.

St. Augustine is a fast growing grass that requires frequent mowing and light nitrogen fertilization. Too much nitrogen encourages excessive thatch build-up, which can lead to disease and insect problems.

Winter kill, chinch bugs, and brown patch are the major reasons for the loss of St. Augustine. Winter kill and brown patch can be avoided by proper management but chinch bugs seem to show up no matter what you do. Early

symptoms of chinch bugs resemble water stress. If your St. Augustine looks drought stressed but the soil is moist, then take a 4"x 4" plug to your Cooperative Extension Office to have it checked.

### **Summary of Characteristics**

- ◆ Coarse texture, deep green color.
- ◆ Low maintenance requirements.
- ◆ Pest resistant.
- ◆ Tolerant of drought, shade, and salt.
- ◆ Greens up quickly in the spring and goes into dormancy later in the fall.
- ◆ Susceptible to low temperature injury.

### **St. Augustine Grass in the Spring**

Fertilization: Apply ½ pound of nitrogen per 1,000 square feet using 12-4-8 or 16-4-8 in May or 2 weeks after green up, whichever is last. (See Fertilization for information on determining fertilization rates.)

Aeration: Consider soil texture. Heavily compacted areas may benefit from core aeration. Wait until May when lawn has come out of dormancy and is actively growing.

Thatch Control: Recommended if thatch layer is ¾ inch thick. Mow grass to 2 ½ inches and use a power rake with 3 inch blade spacing in one direction.

Soil Amendment: Amend as recommended by a soil test.

Renovation: Replant large bare areas in May or June using sod or plugs.

Weed Control: St. Augustine is sensitive to many herbicides. If needed, apply post emergence herbicides at least 3 weeks after grass has broken dormancy, when grass and weeds are actively growing. Always follow label directions and use with caution.

Disease and Insect Control: Watch for brown patch. Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.



Watering: Water to prevent excess drought.

Mowing: Mowing height: 2 ½". Follow the "1/3 Rule". Mow at 5 to 7 day intervals. Use rotary mower – sharpen blade.

### **St. Augustine Grass in the Summer**

Fertilization: Apply ½ pound of nitrogen per 1,000 square feet using 12-4-8 or 16-4-8 in June and August, and 1 pound of nitrogen per 1,000 square feet in July. (See Fertilization for information on determining fertilization rates.)

Aeration: See Spring Recommendations.

Thatch Control: See Spring Recommendations.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended.

Weed Control: Apply postemergence herbicides as needed. Always follow label directions and use with caution...St. Augustine is sensitive to certain herbicides. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress.

Disease and Insect Control: Watch for brown patch and chinch bugs. Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Mowing height: 2 ½" – 3 ½". Follow the "1/3 Rule". Mow at 5 to 7 day intervals. Mow before grass gets above 4".

### **St. Augustine Grass in the Fall**

Fertilization: Do not fertilize St. Augustine after August 31.

Aeration: Do not aerate at this time.

Thatch Control: Check for thatch in early September. If thatch layer is  $\frac{3}{4}$ " thick, plan to dethatch next spring shortly after greenup.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended.

Insect Control: Treat as needed. Be sure to use the appropriate pesticides. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Height: 2  $\frac{1}{2}$ " – 3  $\frac{1}{2}$ ". Follow the "1/3 Rule". Mow at 5 to 7 day intervals. Mow before grass gets about 4".

### **St. Augustine in the Winter**

Soil Sample: Submit soil samples for analysis every 2 to 3 years to determine nutrient requirements of your lawn. Contact your Cooperative Extension Service for details.

Fertilization: Do not fertilize at this time.

Aeration: Do not aerate at this time.

Thatch Control: Do not dethatch at this time.

Soil Amendment: Amend as recommended by a soil test.

Weed Control: Apply broadleaf herbicides as needed. Always follow label directions and use with caution...St. Augustine is sensitive to certain herbicides. Do not apply herbicides if grass is suffering from drought stress.

Watering: Water only to prevent excess dehydration.

Mowing: Clear lawn of debris. Clean mower before storing. Now is a good time to get your mower blade sharpened and ready for spring.



## Zoysia Grass

There are several different cultivars of Zoysia. They were first introduced to the United States from the Orient more than sixty years ago.

Zoysia is an excellent high quality, salt tolerant lawn grass. It is a very low, slow growing grass that makes a dense, wear-resistant lawn. Zoysia grows well in full sun or partial shade. It requires less mowing, but is so dense that a good, sharp mower should be used. Reel mowers perform the best on Zoysia lawns, but are not necessary. It should be mowed on a regular schedule. If "scalped" or poorly maintained, Zoysia is slow to recover.

### **Summary of Characteristics**

- ◆ Thick, tough, rich, dark green lawn.
- ◆ High fertility requirements.
- ◆ Resistant to insects.

- ◆ Drought resistant.
- ◆ Tolerates partial shade.
- ◆ Goes dormant early in the fall, and greens-up late in the spring.
- ◆ Tough to mow, use a reel mower if possible.
- ◆ Spreads quickly.

### **Zoysia Grass in the Spring**

Fertilization: Apply ½ pound of nitrogen per 1,000 square feet using 12-4-8 or 16-4-8 in May or 3 weeks after green up, whichever is last. (See Fertilization for information on determining fertilization rates.)

Aeration: Consider soil texture. Heavily compacted areas may benefit from core aeration. Wait until May when lawn has come out of dormancy and is actively growing.

Thatch Control: Recommended if thatch layer is more than ½ inch thick. Use a power rake and mow vertically, in one direction. Wait until green-up, and do not try to remove too much thatch at one time because Zoysia is slow to recover.

Soil Amendment: Amend as recommended by a soil test.

Renovation: Replant large, bare areas using sod or plugs.

Weed Control: If needed, apply postemergence herbicides in May when grass and weeds are actively growing. Always follow label directions and use with caution...be sure the product is labeled for use on Zoysia.

Disease and Insect Control: Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Mowing height: ¾" – 2". Mow at 5 to 7 day intervals. Follow the "1/3 Rule". Use reel mower, or a rotary mower set as low as possible without scalping.



## **Zoysia Grass in the Summer**

Fertilization: Apply ½ pound of nitrogen per 1,000 square feet using 12-4-8 or 16-4-8 in late June or early July and repeat in mid-August. (See Fertilization for information on determining fertilization rates.)

Aeration: See Spring Recommendations.

Thatch Control: See Spring Recommendations.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended.

Weed Control: Apply postemergence herbicides as needed. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress. Always follow label directions and use with caution.

Disease and Insect Control: Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Watering: Water to prevent excess drought.

Mowing: Mowing height: ¾" – 2" (depending on cultivar). Mow at 5 to 7 day intervals. Follow the "1/3 Rule". Use reel mower, or a rotary mower set as low as possible without scalping.

## **Zoysia Grass in the Fall**

Fertilization: Apply ½ pound of potash per 1,000 square feet using 0-0-60 or 0-0-50 in September, or four to six weeks before the first frost. (See Fertilization for information on determining fertilization rates.)

Aeration: Do not aerate at this time.

Thatch Control: Check for thatch in early September. If thatch layer is more than ½ inch thick, plan to dethatch next spring shortly after green-up.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended.

Weed Control: Apply herbicides as needed. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress. Always follow label directions and use with caution.

Disease and Insect Control: Treat as needed. Check with your Cooperative Extension Service if you are unsure of the diagnosis. Be sure to use the appropriate fungicide or pesticide. Always follow label directions and use with caution.

Mowing: Mowing height:  $\frac{3}{4}$ " – 2" (depending on cultivar). Mow at 5 to 7 day intervals. Follow the "1/3 Rule". Use reel mower, or a rotary mower set as low as possible without scalping.

### **Zoysia Grass in the Winter**

Soil Sample: Submit soil samples for analysis every 2 to 3 years to determine nutrient requirements of your lawn. Contact your Cooperative Extension Service for details.

Fertilization: Do not fertilize at this time.

Aeration: Do not aerate at this time.

Thatch Control: Do not dethatch at this time.

Soil Amendment: Amend as recommended by a soil test.

Overseeding: Not recommended.

Weed Control: Apply broadleaf herbicides as needed. Do not apply herbicides unless weeds are actively growing and grass is not suffering from drought stress. Always follow label directions and use with caution.

Watering: Water only to prevent excess dehydration.

Mowing: Clear lawn of debris. Clean mower before storing. Now is a good time to get your mower blade sharpened and ready for spring.

# Tree and Shrub Management

Once your landscape has been established, proper care is necessary to achieve and maintain the desired effect. The key to proper maintenance is performing jobs at the right time.



## Pruning Hints

- ◆ Do not prune off more than 1/3 of a plant at one time.
- ◆ Prune deciduous, non-flowering trees and shrubs during the winter when plants are dormant and not actively growing.
- ◆ Prune **deciduous, spring-flowering trees and shrubs** such as Forsythia, Azalea, Quince, and Dogwood after they bloom.
- ◆ Prune **deciduous, summer-flowering trees and shrubs** such as Crepe Myrtle and Glossy Abelia during the dormant winter season before spring growth.
- ◆ **Needle Evergreens (Conifers)** are best pruned during the stage when new growth is 2-6 inches in length. They will not tolerate

severe pruning and will likely decline or take on an unnatural appearance when cut back to older wood.

- ◆ **Evergreens** such as Hollies, Ligustrum, and Boxwood can be pruned during their growing season to maintain a desired shape. Frequency of pruning depends on the rate of growth and the shape desired.

*The timing of a chore is as important as doing it correctly.*

## Pruning Techniques

- ◆ Thin out dead, crossed, and misdirected branches, cutting those back to the base.
- ◆ Head back the branches as needed to shape, always cutting just above a bud on the outside of the branch to encourage outward growth.
- ◆ Prune *naturally*, relying mainly on thinning to keep a shrub healthy, letting it grow in natural directions. When you thin a shrub, you remove the oldest branches right down to the ground. That opens the center of the shrub to sunlight, encouraging new branch growth and increased leaf production *throughout the shrub*.
- ◆ Continual pruning of branch ends encourages heavy leaf production *only* at the branch ends. This prevents adequate leaf production inside the shrub and results in leggy shrubs with only bare stems and dense surface growth.

## Tree and Shrub Fertilization

The frequency of fertilization depends on vigor and desired growth rate of your plants. One application a year may be enough for well established plants, whereas two or three applications may be desired for optimum growth of younger plants. The best time of year to begin fertilizing is just before growth begins in the spring. Stop fertilizing by the end of August, as new growth may not be hardened-off enough to withstand the upcoming drop in temperatures.

The type and quantity of fertilizer should be based on soil test recommendations. If you haven't had the soil tested, use a common fertilizer with analyses such as 12-4-8, 8-8-8, or 10-10-10. For best results, use a fertilizer with a form of slowly released nitrogen.





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