LAWN MAKEOVER WORKBOOK APPENDICES

*What Works, What Doesn’t To Help Residents Achieve Beautiful, Eco-Friendly Lawns*
 Attachment A – 
Lawn Care Guide

LAWN GUIDE

You can achieve a beautiful lawn without chemicals! Excess fertilizer washes into our river—causing harmful algae blooms. Help make the Elizabeth River healthy again. Use these secrets to create a healthy lawn that needs less fertilizer.

Make Your Lawn Truly “Green”
The best way to reduce the need for fertilizer is to create a healthy lawn:

Mow high. Mowing too low makes grass susceptible to weeds, pests and diseases. Know your species: Bermuda grass does best at 2 – 2.5 inches; St. Augustine and Zoysia at 3 – 4 inches.

Leaves grass clippings on the lawn... This step alone can reduce the amount of fertilizer you need by half. Bag them and then make compost or use as fertilizer on your garden or farm.

Water less but for longer. Put out a rain gauge and only water if it’s rained less than 1 inch per week.

Aerate it. For a serious lawn makeover, rent a “core aerator” to open up the soil and improve root growth, water and nutrient absorption. Then top dress with compost. (Core aeration is available for rental by the hour from many local hardware stores.)

“Top-dress” with compost. Spread a quarter inch of compost (about 3/4 cubic yard per 1,000 square feet) over your lawn in spring and fall following aeriation. Rake in. Compost provides valuable nutrients and microorganisms to keep your grass healthy.

Identify your grass species. This is the best way to really know what your grass needs to stay healthy. So pull up a sprig from your lawn, then go to the computer to identify it at: http://www.rsm.ucr.edu/TOOLS/TUFF/TURFSPECIES/

Choose the right grass. We recommend warm season grasses (St. Augustine, Zoysia, Bermuda) for our Hampton Roads climate. Use Bermuda grass for full sun and St. Augustine or Zoysia for light shade. If you have cool season grasses (turfgrass, bluegrass, rye grass), consider converting to warm season grasses over time.

Add white clover seed! Converting just 5% of your lawn to clover can completely eliminate the need to fertilize. Clover adds nitrogen to your yard naturally. We recommend low-growing white clover.

Re-seed once a year. A thick turf is one of the best ways to control weeds. Seed warm season grasses March – July; best results. March. Cool season grasses (not preferred in our area) are best planted mid-
Find out if you qualify for a free on-site consultation with our lawn care specialists on how to reduce fertilizer use and improve your lawn. Call or email the River Star Homes team, 399-7487 or riverstarhomes@elizabethriver.org.

**KNOW YOUR SOIL**

**Test don’t guess.** Your lawn may not need fertilizer or it may not need the kind you’re using. Find out with a soil test. We recommend a “low impact” soil test with A & L, www.aalastem.com. They’ll give you river-friendly advice with your results.

**IF YOU FERTILIZE**

**Do not apply phosphorous** unless your soil test indicates you need it.

**Choose slow-release fertilizers** (coated & water insoluble) that help roots develop and that wash away less easily. Do not apply slow or time-released nitrogen at rates above one pound per 1,000 square feet. Apply only as much as it says.

**Use organic materials** such as compost and kelp instead of synthetic fertilizers.

**Never apply fertilizer if rain is forecast.** While controlled watering is necessary to allow fertilizer to soak in, a deluge will wash away much of what you’ve applied—into the river through street gutters and storm drains.

**Sweep any fertilizer off paved areas** before it washes away.

**Create your own compost.** Kitchen scraps (not egg shells), weeds, paper, leaves, and other things that we throw away can create compost that improves soil health www.the-compost-gardener.com

**REDUCE TURF, GROW**

**Convert more of your lawn to native plants** and flower beds. Learn how with our free Wildlife Habitat Guide.

**Plant a buffer of low native shrubs** and showy native ornamentals between your lawn and the river, or if you don’t live on the river—between you and the street gutter. The buffer will do a better job than your

**FLOWERS & WETLANDS**

**Lawn of absorbing storm water runoff.** Our Wildlife Habitat Guide lists native plants for the Elizabeth River area.

**Conserve wetlands.** If you live on the waterfront, please—it’s super important—keep your native wetland grasses along the shore. Wetlands are some of the most productive ecosystems in the world, as well as nature’s pollution filters.
IF SOMEONE ELSE DOES YOUR LAWN CARE

Is your lawn care company helping you meet your goals as a River Star Home? Ask these questions to be sure.

1. What kind of fertilizer do you apply? What proportion of this contains slow-release nitrogen? We’re hoping for at least 50% slow-release fertilizer. Ideal are organic fertilizers such as compost and kelp (sea weed). There are two problems with fast-release, chemical-synthetic fertilizers. First, when they release their nutrients quickly, they create excessive grass-blade growth at the expense of root development. This unbalanced growth weakens your lawn. Second, quick-release fertilizers leach away without being used by grass plants, especially in sandy soils. Unused nutrients then wash into the river, contributing to harmful algal blooms.

2. How do you control your rate of fertilizer application? You should get a description of how to calculate the amount needed, based on your yard’s acreage and fertilizer application rates. This increases the chances of your provider not over-fertilizing.

3. How do your recommendations reflect the specific conditions of my lawn? In order to avoid over-fertilizing and over-watering, your lawn care company should first conduct a soil test and diagnose the needs of your specific lawn before discussing a plan.

4. Do I have warm or cool season grasses? What are the differences in terms of water and fertilizer needs? If your company can’t tell you, this should be a clue that they may not be adjusting fertilizer and watering to meet the specific needs of your yard.

5. What “green” practices do you follow when mowing? What we like to see. Leave clippings on the lawn to compost as natural fertilizer. Ideally, the company also uses an electric mower as gas mowers are a surprisingly large source of air pollution, which contributes to water pollution. Also, keeping mower blades sharp is good for your grass.

6. What is your approach to weed control for my lawn? Although tastes differ, ideal for the river is an approach that tolerates some “weed” species such as clover. Clover is not just beautiful, it restores nutrients. If just 5% of your lawn is clover, it may be enough for you to avoid adding fertilizers.

7. What alternatives to chemical pesticides will you use? Ideally, your lawn care company will offer to sign a contract guaranteeing that chemical pesticides will not be used on your property. A company that posts the familiar warning sign after a visit is using toxic chemicals that could be harmful to your children and pets, not just to the river.

8. Does your company have a “Water Quality Improvement Agreement” with Virginia Dept. of Conservation and Recreation’s Nutrient Management Program? If not, consider referring them to this program where they can sign an agreement to follow green practices. Here’s the phone number in Richmond: 804-786-1712.

“Our home has earned my neighborhood’s yard of the month award several times, which helps to promote my use of organic and natural products. When we take good care of our home and yard, it helps others learn about practices to keep our river safe.” - Hope McDonald, River Star Home
CLOVER IS A GOOD LUCK CHARM
FOR YOUR YARD AND THE RIVER!

White clover (Trifolium repens) was once a common part of the American yard, but clover was largely wiped out when herbicides became popular beginning in the 1950s. Clover is starting to make a comeback because of its many benefits.

Clover Benefits

- Clover reduces or eliminates your need for lawn fertilizer. Clover is a natural fertilizer; it converts nitrogen in the air (which plants can't use) to nitrogen in the soil (which plants need). A yard containing as little as 3% clover can provide enough nitrogen to fertilize your entire lawn when you leave the clippings on the ground after you mow.

- Clover stays green all summer with little or no watering. Clover is relatively drought tolerant and it greens up early in spring and remains green until the first frost.

- Clover requires little or no mowing. White clover grows just 2-8 inches tall.

- Clover never needs herbicides (in fact, most herbicides kill clover). Fortunately, clover out-competes most other weeds.

- Clover grows well in poor soil. Clover tolerates a wide variety of soil conditions, including poor-quality soil.

How to Add Clover to Your Lawn

Add clover seed to your existing lawn or simply stop fighting the clover plants that are already in your yard.

Seed at 2 to 8 oz./1,000 sq. ft., depending on how much clover you want in your lawn (at 8 oz./1,000 sq. ft, clover will dominate). An average cost is $60 (found at Gardens in a Flower Pot and VA Beach Feed & Seed or order from Southern Exposure Seed Exchange). Seeds are small, so mix with sugar, sand or sawdust and distribute with a flour sifter. Rake first to loosen the soil.

Seed in spring – or fall. The best time to plant clover is in March or April, but late summer and fall plantings may be successful as well. New clover plants grow best in plenty of sunlight. If winter weather kills plants sown in the fall, simply re-seed in spring. Clover is a short-lived perennial, so it will require re-seeding every three years or so.

Water the clover seeds gently, and keep them damp until they take root (about two weeks after planting). Then water no more than once a week.

In a few weeks, you'll have lush, thriving clover fertilizing your yard!

River Star Homes is a citizen stewardship program of the Elizabeth River Project. This project has received funding from National Fish & Wildlife Foundation, Bank of America, Chesapeake Funders' Network, HRSD, and the Virginia Department of Conservation and Recreation. Special thanks to Lynnhaven River Now and My Sister's Garden, Organic Lawn & Landscaping for shared lawn care tips.
Congratulation!
Your River Friendly Lawn Makeover is Underway.

Dear Homeowner,

*Thank you – We are so glad we can count on you* to help the Elizabeth River and its tributaries with a beautiful lawn that’s also healthy for your family, pets, and the river. Terri Foss, the River Star Homes lawn care advisor, visited your home and interpreted the soil analysis enclosed to create these recommendations. *We currently have up to $500 to help implement your lawn care plan*, either by yourself or with a contractor that we can recommend. I will contact you shortly to discuss how we can help you get started.

Materials you will need to get started:

**5.5 cubic yards leaf compost:** 3 yds front (including sides and median); 2.5 yds back – Organic leaf compost provides nitrogen, phosphorus, potassium, sulfur and microorganisms that are essential for plant growth. It holds soil and water particles together to reduce erosion. It binds itself to polluting metals, pesticides and other contaminants to prevent them from washing into waterways and it helps to maintain proper pH. Additionally, it helps to provide immune resistance and suppress many fungal pathogens. Sources include New Earth Farm, 536-6102, Jack Frost, 368-4477, and Colley Gardens, 423-1111.

**Corn Gluten** – Corn Gluten Meal is a by-product of the corn milling process. It provides an organic source of slow release nitrogen as well as containing a root-inhibiting hormone that prevents weed seeds from establishing germination. It is available from Gardens in a Flower Pot in Norfolk and New Earth Farm in Virginia Beach. *For those who wish to use it primarily for weed control*, it is available as a liquid Ready-to-Spray, online at HomeDepot.com and Amazon.com, as a product called “Green It- Liquid Corn Gluten Weed Preventer.” One 64-oz container will cover 2,000 sq ft and costs about $22.00.

**28 lbs Muriate of Potash** – Muriate of Potash is a naturally occurring, mined mineral. It is an enriched source of potassium, which aids in developing plant vigor and disease resistance. The product is applied as a granular in a spreader at any time of the year and can be found at most garden stores. *If you have trouble finding this product*, Gardens in a Flowerpot in Norfolk carries different formulas in small quantities and will assist you in calculating how much you need, based on the product you choose.

**290 lbs pelleted dolomitic lime (7.25 40-lb bags)** – Dolomitic lime will neutralize soil acidity and provide needed magnesium. You may find pelleted Dolomitic lime in most garden centers and hardware stores such as Lowes and Home Depot. It costs about $4.50/40 lb bag.

475 Water Street, Suite C103A, Portsmouth, Virginia 23704 ~ (757)399-7487 ~ www.elizabethriver.org
St. Augustine plugs – St. Augustine plugs (Palmetto variety) are available at McDonalds Garden Center in Virginia Beach, 464-5564, Smithfield Gardens in Suffolk, 238-2511, and online at: seedland.com. Call for pricing and availability; they usually become available between late April and early May.

43 lbs Nature Safe Nitrogen Fertilizer (1 50-lb bag) – To maintain your lawn, we recommend a nitrogen-only fertilizer to aid in plant growth. Nature Safe fertilizer is certified organic and available from Southern States in Chesapeake, 545-2449. They recommend calling to ensure they have the correct product available and will order it if not.

For your entire lawn: 5,695 sq ft:

- **Aerate lawn areas and top dress entire area with organic leaf compost.** This step is the most important one you can take for a healthy lawn without chemicals. See the enclosed handout for how to do it yourself, or I can recommend a contractor to do it for you. **This step should be repeated for at least three years to encourage healthy soil.**

- **Water** during periods of long hot spells. It is important to remember that during times of drought and extremely hot weather, your lawn will benefit from watering about once every 7-10 days. Ideally, **grass needs about one inch of water per week.** Water for one to two hours at a time. This deep but infrequent watering encourages roots to penetrate deeper.

- **Use corn gluten for weed control.** To help control the crabgrass and other weeds in the turf and beds, use corn gluten meal as a pre-emergent weed control.* Application timing is critical in using the product for its pre-emergent capabilities. **It is best applied in early spring when the Forsythia begins to bloom, again in mid-September and again the following spring.** It is also available as a liquid online at HomeDepot.com and Amazon.com, as a product called “Green It- Liquid Corn Gluten Weed Preventer.” One 64-oz container will cover 2,000 sq ft and costs about $22.00. Product application rates vary widely depending on the product purchased. Prior to applying, please read the application information on the product packaging and follow recommendations accordingly. As a fertilizer, it provides an organic, slow release form of Nitrogen. *You may have more success with the granular in helping to control the Crabgrass.

- **Mow lawn 3.5-4” during peak crabgrass germination** for 6-8 weeks when Forsythia begin to drop blooms. This will help to reduce crabgrass by about 50%.

- **Consider plugging St. Augustine grass next spring in front and bare areas in back** – St. Augustine grass (Palmetto variety) is durable, thriving in both shade and sun and able to withstand drought conditions, once established. Ideally, this should be done during its active growing season, early May–September. You can use your own turf as a source for plugs.

- **Apply organic slow release nitrogen-only fertilizer** to your entire lawn at a rate of 7.5 lbs/1,000 sq ft. You will need a total of about 43 lbs to cover your entire lawn. This application should be put down in mid-April and again in mid-June.

Sample #1-Front (includes sides and median)-3,093 sq ft (patch of St. Augustine in front, mostly crabgrass, weedy, St. Augustine on left side)

- **Add pelletized dolomitic lime to address the low pH.** You will need a total of about 186 lbs (4.6, 40-lb bag) to be applied in two applications. The first application of 155 lbs (3.9 bags) can be applied now, setting your spreader at 50 lbs/1000 sq ft. The second application of 31 lbs (about ¾ bag), with spreader set at 10 lbs/1,000 sq ft, may follow in 3 months (November).

- **Apply Muriate of Potash on lawn for optimum potassium levels.** You will need to apply Muriate of Potash at a rate of 5 lbs/1,000 sq ft. The total amount needed is about 15 lbs. Do not over-apply. This application can be repeated annually. This is optional, but recommended for optimal results.
• Check out this website for more insight into controlling the crabgrass:

For sample #2 back lawn—2,600 sq. ft (predominantly St Augustine, some bare areas):
• Add pelletized dolomitic lime to address the low pH (5.6). You will need a total of about 105 lbs (2.6, 40-lb bags) to be applied in one application. It can be applied now, setting your spreader at 40 lbs/1,000 sq ft
• Apply Muriate of Potash on lawn for optimum potassium levels. Apply at a rate of 5 lbs/1,000 sq ft. The total amount needed is about 13 lbs. Do not over-apply. This is optional, but recommended for optimal results.

Please note that it will take about three years to convert your lawn to a self-sustaining, healthy ecosystem. The amount of effort needed should drop each year. We look forward to working with you to bring about this rewarding transformation. Thank you for all you are doing for your home river. We welcome your feedback to make lawn visits more meaningful. If you have questions for Terri directly, feel free to call her at 544-4040. I look forward to speaking with you shortly.

Respectfully,

The River Star Homes Team
Elizabeth River Project
Office: 757-399-7487
Attachment C -
Lawn Tip Sheet – Aerate & Compost

HOW TO AERATE AND APPLY COMPOST for a Truly Green Lawn
Tips for River Star Homes

Benefits of Aeration:
- Stimulates root growth: Allows your turf to establish strong deep root systems for a healthy lawn.
- Increases microorganism activity in soil: Helps prevent disease and provides vital nutrients for turf.
- Increases water, nutrient and oxygen movement: Critical for plant growth.
- Enhances filtration of rainfall: Assists in the prevention of fertilizer and pesticide runoff.

How to Aerate Your Yard:
- Water thoroughly before aeration: 1” of water from irrigation or rainfall. For a dry lawn water every 3–4 days until 1” saturation is achieved. (You can rent an aerator at a local hardware store such as Lowes, Home Depot, and Ace Hardware.)
- Aerate your lawn in 2 different directions: Ensures even aeration.
- Leave cores on lawn surface, allowing the cores to work back into grass within 2–4 weeks.
- After aeration: Apply 1/4” of compost in an even layer with a rake.

Benefits of Compost:
- Raises organic matter levels in soil: Adds nutrients vital to plant growth.
- Compost heats up as it decays, killing pathogens and weed seeds that compete with your turf.
- Reduces the need for fertilizer, aeration and lime.
- Full of microorganisms that are essential to healthy soil: Creates competition so that diseases are unable to thrive.

How to Apply Compost:
- Look for leaf compost that has an earthy smell.
- Use a rake to apply 3/4 cubic yards/1000 sq. ft.: Aim for 1/4” thick compost coverage.

Special thanks to My Sister’s Gardens, a certified organic landscaping company in Virginia Beach. For more information, visit www.rivestarhomes.org
Attachment D -
Lawn Tip Sheet – Applying Lime

HOW TO APPLY LIME
for a Truly Green Lawn
Tips for River Star Homes

Why Add Lime?:
• The application of lime helps to balance the pH of your lawn to a healthy level for plant growth.

Types of Lime Commonly Used:
• **Calcitic Lime**: Neutralizes soil acidity and adds calcium to soil to encourage plant growth.
• **Dolomitic Lime**: Neutralizes soil acidity and also supplies calcium and magnesium to soil.
• **Aragonite**: Neutralizes soil acidity without adding magnesium. It also adds calcium to the soil.

Determine If Your Lawn Needs Lime:
• **Take a Soil Sample**: A soil test will help determine if your lawn needs additional lime and what type of lime is best.
• **Lime should only be applied after a soil test indicates it is needed**: Too much can cause the pH of your soil to rise.

How to Apply Lime:
• You can use either a drop spreader or spinner spreader (see manufacturer's directions for proper settings).
• Lime should be applied in the fall: Material will break down over winter before next growing season.
• Apply lime in a crisscross pattern: use ½ the lime application in one direction and the remaining ½ perpendicular to the first application to ensure even cover.

How to Apply Two Applications of Lime (if Needed):
• If soil requires a lime application of more than 50 lbs/1000 sq. ft., split recommended amount of lime evenly over two applications.
• Lay down each application 3 to 6 months apart using the same methods as above.

Special thanks to *My Sister's Garden*, a certified organic landscaping company in Virginia Beach.
For more information, visit [www.riverstarhomes.org](http://www.riverstarhomes.org)
Attachment E -
Lawn Tip Sheet – Corn Gluten as Weed Control

HOW TO USE CORN GLUTEN TO CONTROL WEEDS for a Truly Green Lawn
Tips for River Star Homes

What Is Corn Gluten?

- Corn gluten is a powdery yellow by-product of the corn milling process.
- Provides non-toxic weed control: Works by inhibiting root formation when the weed is germinating.
- Results are cumulative over time: The first application provides 65% control, the second application provides 75% control and the third application provides 80-90% control.

Forms of Corn Gluten:

- Unprocessed: Yellow in color, very powdery and fine in texture. It can be best distributed by a spreader but can also be done by hand. Looks like a fine dust of pollen on grass when applied.
- Granulated corn gluten: Yellow in color, larger than the unprocessed with a coarser texture. Is best distributed by spreader but can also be done by hand.
- Pelletized corn gluten: Small yellow pellets. Is best distributed by hand but can also be done with a spreader.

How to Apply Corn Gluten to Your Lawn:

- Apply at a rate of 20 lbs/1000 sq. ft. for most lawns: See product bag for more specific application rates. Can be spread by hand or using a spreader.
- Apply in successive growing seasons: Lay down the first application in mid-September, the second in the spring (when the dogwoods bloom) and the third the following fall. You can also apply in a pattern of spring, fall, spring.
- Allow 4 – 8 weeks after application before applying cover seed: Corn gluten inhibits root growth during germination, but it does not affect mature plants.
- Can also be applied to walkways and garden beds to prevent weeds but should only be used around mature plants (not seedlings).

Special thanks to My Sister's Garden, a certified organic landscaping company in Virginia Beach.
For more information, visit www.riverstarhomes.org
Attachment F -
Lawn Tip Sheet – Corn Gluten as Weed Control

HOW TO PREVENT WEEDS
for a Truly Green Lawn
Tips for River Star Homes

Prevent Weeds Before They Come Up
- Select the right grass for your lawn; warm season grasses such as Bermuda and St. Augustine are best for our area.
- Mow high to shade out weeds — 2” for Bermuda, 3-4” for St. Augustine.
- Water deeply but infrequently. Grass needs about 1” of water each week while growing. Over- or under-watering creates an environment that favors weeds.
- Aerate your lawn to reduce soil compaction and help grass grow.
- Apply corn gluten at a rate of 10 lbs. per 2,000 sq. ft. of lawn in mid-September and again in spring when the Forsythia begin to bloom. Corn gluten prevents seeds from growing into plants, so don’t use it if you’ll be planting grass seed within a few weeks.

Removing Weeds After They Come Up
- Hand pick weeds. Make sure to remove the entire plant, including the roots, and dispose of it in the trash — many weeds can regrow from parts or seeds.
- Spray leaves of weeds with white or horticultural vinegar; take care to avoid spraying other plants.
- Use an organic weed control product such as Burn Out. These products usually contain cove oil and/or citric acid to kill weeds.

Reading the Leaves: Weeds are often a symptom of underlying problems with your soil. Below are some common weeds and what they can tell you about your soil.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Where it Grows</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chickweed</td>
<td>Acidic, compact soils; prefers shade</td>
<td>Address pH with lime, aerate and apply compost</td>
</tr>
<tr>
<td>Crabgrass</td>
<td>Compacted soils along driveways and sidewalks</td>
<td>Aerate and apply corn gluten in spring</td>
</tr>
<tr>
<td>Dandelion</td>
<td>Wet, acidic soils; usually means grass is moved too low</td>
<td>Mow high, avoid overwatering, hand weed, and address low pH!</td>
</tr>
<tr>
<td>Plantain</td>
<td>Compacted, wet soils</td>
<td>Aerate soil, avoid overwatering, hand weed</td>
</tr>
</tbody>
</table>

*Test your soil before applying any amendments, including lime, to your yard.
Attachment G -
Lawn Tip Sheet – St. Augustine Plugs

HOW TO ADD
ST. AUGUSTINE GRASS
for a Truly Green Lawn
Tips for River Star Homes

How to Plant St. Augustine Plugs:
○ Plant plugs as soon as possible after purchase.
○ Use a bulb planter or shovel to dig holes:
  Make sure the holes are big enough for
  the plug to sit in.
○ Dig the holes 6–12” apart in a grid-like
  pattern.
○ Set plugs in holes so the base of grass is
  just above ground level.
○ Fill in soil so each plug is in line with
  ground level.
○ Use your heel to press down on plug:
  Roots should make contact with
  underlying soil.
○ Water plugs frequently: Prevents them
  from drying out and encourages growth.
○ Keep soil moist until new growth is
  noticed between the set plugs.
○ Full growth can take 6 to 12 months.

Benefits of Using St. Augustine Grass:
○ It is a warm season grass that requires
  little maintenance.
○ Thrives in most soil types.
○ Tolerates shade.
○ Tolerates low temperatures while
  retaining its green color.

What are St. Augustine Plugs?
○ Plugs are 2–4” cuts from sod with soil
  around the roots.
○ They come in circular or square cuts.
○ Plugs take root in your lawn. This
  resilient grass spreads as it grows and
  will eventually cover your yard.

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Special thanks to My Green’s Garden, a certified organic landscaping company in Virginia Beach.
For more information, visit www.rivestarhomes.org
Attachment H -
Lawn Tip Sheet – Benefits of Clover

HOW TO ADD CLOVER for a Truly Green Lawn
Tips for River Star Homes

Your lawn’s (and the river’s) good luck charm

White clover (Trifolium repens) may just be the luckiest thing to ever happen to your lawn. Once a common part of the average American yard, clover was largely wiped out when herbicides became popular beginning in the 1950s. Now clover is starting to make a comeback because of its many benefits.

Clover Benefits

Clover reduces or eliminates your need for lawn fertilizer. Clover is a natural fertilizer; it "fixes" the nitrogen in the air and converts it into usable nitrogen in the soil. A yard containing as little as 3% clover can provide enough nitrogen to fertilize your entire lawn when you need it the most.

Clover stays green all summer with little or no watering. Clover is relatively drought-tolerant and it grows up early in spring and remains green until the first frost.

Clover requires little or no mowing. White clover grows just 2-8 inches tall.

Clover never needs herbicides (in fact, most herbicides kill clover). Fortunately, clover outcompetes most other weeds.

Clover grows well in poor soil. Clover tolerates a wide variety of soil conditions, including poor quality soil.

How to add clover to your lawn

Add clover seed to your existing lawn, or simply stop fighting the clover plants that are in your yard.

Seed at 2-8 oz/1,000 sq. ft., depending on how much clover you want in your lawn. (at 8 oz./1,000 sq. ft. cover will dominate). An average cost is $5/lb. (found at Gardens in a Flower Pot and MH Beach Food & Seed or order from Southern Exposure Seed Exchange). Seeds are small, so mix with sugar, sand or seaweed and distribute with a flour sifter. Water first to loosen the soil.

Seed in spring – or fall. The best time to plant clover is in March or April, but late summer and fall plantings may be successful as well. New clover plants grow best in plenty of sunlight. F winter weather kills plants down in the fall, simply re-seed in spring. Clover is a short-lived perennial, so it will require re-seeding every three years or so.

Water the clover seeds gently, and keep them moist until they take root (about two weeks after planting). Then water no more than once a week.

In a few weeks, you’ll have lush, thriving clover fertilizing your yard!
Attachment I -
Lawn Tip Sheet – How to Properly Mow Lawn

HOW TO MOW for a Truly Green Lawn
Tips for River Star Homes

How to Properly Mow Your Lawn:
- Keep mower blades sharp: Sharpen blades after every 8 hours of use.
- Use a mulching mower: These mowers return grass clippings to your lawn.
- Mow at the proper height for your turf: Make sure to only remove 1/3 of the blade with each mowing.
- Alternate mowing directions each time you mow: Ruts form when the wheels of the mower pass over your lawn in the same direction every time and can leave your lawn looking uneven.

Benefits of Mowing High:
- Creates a low-maintenance, drought tolerant lawn.
- Helps shade out weeds.
- Prevents weeds from germinating.

Benefits of Recycling Grass Clippings:
- Provides nitrogen: A vital nutrient which helps keep your lawn green and healthy.
- Reduces the need for fertilizer and watering.

Problems with Dull Mower Blades:
- Can tear the grass: Leaves these areas of grass vulnerable to disease.

Problems with Mowing Too Short:
- Can shock the grass: May prevent proper growth and increase the chance of disease.

Mowing Heights for Your Turf

<table>
<thead>
<tr>
<th>Grass Type</th>
<th>Mowing Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahia</td>
<td>3” – 4”</td>
</tr>
<tr>
<td>Bermuda</td>
<td>1” – 2”</td>
</tr>
<tr>
<td>Buffalo</td>
<td>3” – 4”</td>
</tr>
<tr>
<td>Centipede</td>
<td>1.5” – 2.5”</td>
</tr>
<tr>
<td>Fine Fescue</td>
<td>2.5” – 3”</td>
</tr>
<tr>
<td>Tall Fescue</td>
<td>2” – 4”</td>
</tr>
<tr>
<td>Kentucky Blue</td>
<td>2” – 3”</td>
</tr>
<tr>
<td>Rye</td>
<td>2” – 3”</td>
</tr>
<tr>
<td>St. Augustine</td>
<td>3” – 4”</td>
</tr>
<tr>
<td>Zoysia</td>
<td>1.5” – 2.5”</td>
</tr>
</tbody>
</table>

Special thanks to My Sister’s Garden, a certified organic landscaping company in Virginia Beach. For more information, visit www.rivestarhomes.org
How Often Should You Water?
- See watering recommendations (bottom right) for a watering schedule specific to your grass.
- Generally, your lawn will flourish with 1” of water each week during growing season.
- Water in the morning, instead of at night or in direct sunlight.
- Soil should be saturated 6-8 inches deep to encourage deep roots.
- Do not over-water to the point that excess water can be seen draining from your lawn or after it has rained.

Problems with Under-Watering:
- Lack of water can create short roots that are close to the surface and in danger of drying out or contracting disease.
- Low saturation of soil prompts weeds to grow, which compete with your turf.
- Potential for a chinch bug infestation.

Problems with Over-Watering:
- Can suffocate turf.
- Spreads disease and causes rot.
- Causes nutrient runoff from your lawn.

How to Determine Saturation Depth:
- Drive shovel or spade into ground and push forward to see how deep soil is saturated with water.

How to Determine Sprinkler Rate:
- Use a can or rain gauge, placed within range of sprinkler, to capture water.
- Measure water collected after 1-2 hours of watering.

How Long Can You Wait Before Watering?

<table>
<thead>
<tr>
<th>Days without Water</th>
<th>Type of Grass</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 – 21 days</td>
<td>Bahia, Bermuda, Centipede, St. Augustine</td>
</tr>
<tr>
<td>8 – 12 days</td>
<td>Carpet, Fine and Tall Fescue, Kikuyu, Seashore Paspalum, Zoysia</td>
</tr>
<tr>
<td>5 – 7 days</td>
<td>Bent, Kentucky Bluegrass, Rye</td>
</tr>
</tbody>
</table>

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