Sustainable Fescue Lawns in the Piedmont

NC STATE UNIVERSITY
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COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Charlotte-Mecklenburg STORM WATER Services

CleanStreams Green Lawns

The Value of Lawns

- Add value to your home
- Stabilize the soil & prevent erosion
- Filter water before it reaches drinking water
- Produce oxygen
- Trap pollutants in thatch
- Reduce…
  - air & noise pollution
  - heat, dust, glare
  - surface runoff water

Keys To a Healthy Lawn

- ✓ **Amend soil for organic matter, pH and nutrients**
- ✓ **Do a soil test to determine what to add**
- ✓ **Maintain proper water and blade height**

Grass Type

Warm Season Turfgrasses

- Bermuda, Centipede, Zoysia, St. Augustine
- prefer sunny, southwest exposures
- optimum growth in spring-late summer
- slow to green-up; dormant in winter
- establish April - July

Cool Season Turfgrasses

- Fescue, Ryegrass, Bluegrass
- prefer northern exposures
- optimum growth in spring & fall
- grow less actively in summer
- establish September - October

Tall Fescue

- ✓ Accounts for ~90% of NC Piedmont lawns
- ✓ Cool season grass
- ✓ Prefers a soil pH of 5.5 – 6.5
- ✓ Mow & maintain a blade height of 2.5” – 3.5”
- ✓ Fescue is a clumping grass. It does not spread

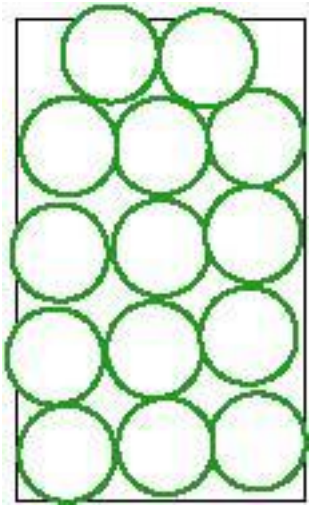
To establish a brand new yard:

- ✓ Plant Sept. 1 – Oct. 15 @ 6 lb of seed / 1000 ft^2

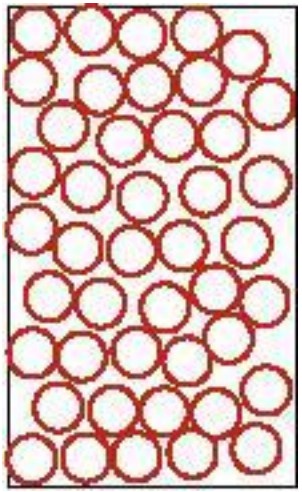
Amendment –

Organic Matter

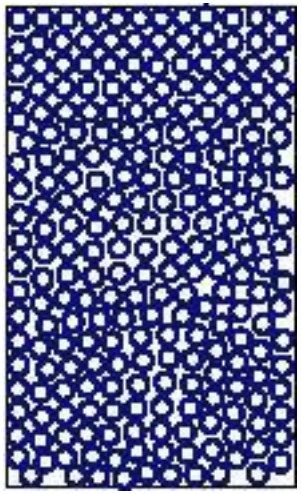
Soil Types



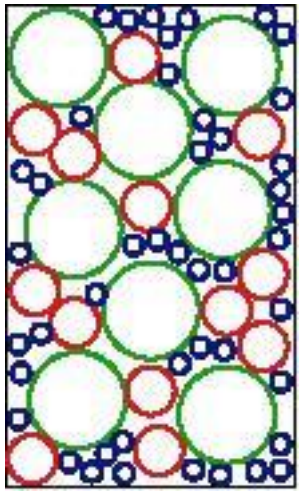
SAND



SILT



CLAY



LOAM

Soils in Mecklenburg County

Generally speaking, soils in our area are:

- ✓ **Acidic**
- ✓ **Low in organic matter**
- ✓ **Compacted**
- ✓ **Fine textured (clayey silts & sandy silty clays)**

Soil Improvement

Adding Organic Matter

<u>Clay + Sand</u> = decreased drainage & aeration (concrete)

<u>Clay + Organic Matter</u> = increased water holding capacity, drainage, and aeration

Organic Matter

To improve soils that suffer from high compaction, poor drainage, and erosion …

- **Add 3-6” and incorporate (aeration, rake, etc.)**
- **OM must be decomposed before plant can use nutrients**

More economical:	**Less economical:**
Compost	**Vermiculite**
Manures	**Perlite**
Pine bark	

Peat moss is not recommended

Amendments – pH (Lime)

To raise pH

- Can take 6 to 12 months to see pH change
- Surface application react slower
- Best to aerate; but not necessary
- One application a year is best
- Lime can be added anytime of the year but winter is usually best
- Winter rains and alternating freezing and thawing can help to incorporate into soil

Lime

Dolomitic Lime

- mixture of calcium and magnesium carbonate
- use on soils low in magnesium

Calcitic Lime

- calcium carbonate
- use on soils high in magnesium

Gypsum is not lime

Lime: Powder vs. Pelletized

Powder

- reacts faster
- the finer the powder – the more rapidly it becomes effective
- Can be dangerous; take precautions when applying

Pelletized

- usually more expensive but easier and less messy to use
- pellets disintegrate & release lime when they contact water
- will act more quickly if re-tilled into ground several days after being applied

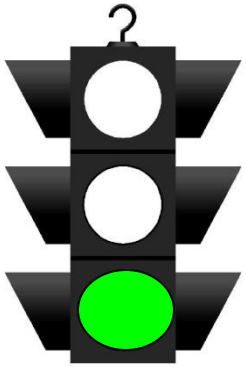
Amendments – Nutrients

Fertilizing

- **Standard recommendation for Fescue: 1 lb. of nitrogen / 1000 ft^2 per application**

- **Use <u>slow release nitrogen</u> instead of fast release nitrogen**
  - **-soluble salts accumulate & burn plant tissue**

- **Fertilize the lawn, not the driveway & sidewalks**
  - **-Load your fertilizer spreader on the driveway or other hard surface**
  - **-Sweep up dry fertilizer spills and apply to your lawn at the right time and in the right amount**
  - **-Add liquid fertilizer to the spray tank while it is on the lawn**



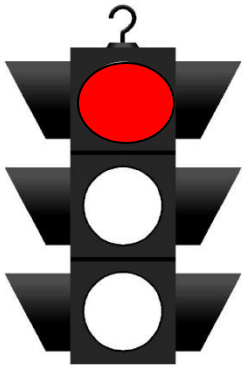
DO **Fertilize in:**

February - .05 to 1 lb N /1000 sq. ft.

September (Labor Day) – 1 lb N /1000 sq ft.

November (Thanksgiving) – 1 lb N /1000 sq. ft

For total of 2.5 or 3.0 lbs N/1000sq. ft. per year



DO NOT **fertilize during late spring or summer because…**

- **Fescue can not utilize fertilizer at this time**
- **Nitrogen builds up in soil**
- **Disease organisms grow in excessively fertilized soils (Brown Patch)**
- **Pollutes environment**

Fertilizer bag

N-P-K

N- Nitrogen
P- Phosphorus
K- Potassium

10-10-10 **16-4-8** **33-12-4**

Maintenance

Create A Good Offense

- Plants that are sick or under stress give off chemicals (pheromones) that signal and attract insect pests

- Keep plants healthy by planting & maintaining correctly

Preventative Maintenance

- ✓ Allow proper air circulation & necessary sunlight
- ✓ Do not plant grass beneath trees & shrubs
- ✓ Mow grass at proper height, never removing more than 1/3 of the blade at a time
- ✓ Do not mow grass when wet, as it may spread diseases
- ✓ Keep mower blades sharp to ensure a clean cut

Core Aeration

- Mechanical removal of soil cores from the lawn to relieve soil compaction, manage thatch, and improve water & air movement through the soil
- Pull 9 soil cores per square foot and leave cores on the lawn surface to decompose
- Making holes without removing soil cores is ineffective
- Core aeration is best done when cores can be pulled (spring and fall)

Overseeding

Replenishes desirable turfgrass and produces a denser lawn that will out-compete weeds

1. Match turfgrass species and cultivars to current lawn
2. Mow lawn short at 1-1.5 inches, then core aerate
3. deposit grass seed into the cores, for high germination rates
   - Scattering seed on the lawn with no cultivation is ineffective
4. Topdress lawn with ¼” compost; water thoroughly
5. Return to normal mowing height and KEEP OFF THE LAWN
6. Water frequently and lightly to keep seed moist until it germinates
7. Return to normal irrigation rate (in absence of rainfall)

Irrigation

- Established Lawn – one inch of water once a week

- Apply water slowly and to a depth of 6- 8 inches to encourage deep rooting

- Water in early morning (before noon)
  - -prevents water loss through evaporation
  - -foliage dries before evening/night
  - -reduces risk of disease

Irrigation

Do not water during the summer unless you plan to water *all* summer

Too much water is worse than too little

Set your sprinkler system to water properly

Summary

Measure your yard area in square feet

1. **Add fertilizer three times a year (holidays)**
2. **Add lime (if needed) once a year (winter)**
3. **Add organic matter once a year (fall)**

Do a soil test to avoid guessing

Aerating is a great way to incorporate stuff into the soil

Storm Water Services Tips:

Fertilizer at the wrong time in the wrong place does not help your lawn. ***(But the weeds say Thank You for your support!)***

A low maintenance yard has no turf grass.

Don’t fertilize before a heavy rain and sweep up fertilizer on driveways, roads and sidewalks.

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For more information:

NC State Turf Files

http://www.turffiles.ncsu.edu/

- Turfgrass selection decision aid
- Turfgrass & Weed ID decision aid
- Turfgrass management calendars
- Publications regarding…

Varieties	Cultivation	Soils
Pesticides	Water Quality	Fertilizers
Diseases	Insects	Weeds

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