UNIVERSITY OF MISSOURI Extension

CAPE GIRARDEAU COUNTY
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Lawn Management

A. Grass Species Selection:

Cool Season Grass – Spring and Fall Growth (Graph 1)

Turf Fescue (TF) – https://extension2.missouri.edu/g6700

- Minimum blend of three turf fescue varieties
- NOT Kentucky 31 except on large acreage if too cost prohibitive to plant TF
- No more than 10% KY Bluegrass mixed w/ TF
- Avoid ryegrass
- 9 to 10 month growing season (March to November)
- Best root growth at 50 to 65 degrees F soil temp
    - roots continue to grow until soil freezes
- Best shoot growth at 60 to 75 degrees F

Warm Season Grass – Summer Growth (Graph 1)

Zoysia – https://extension2.missouri.edu/g6706

- NOT Bermudagrass except on athletic fields or large acreage due to invasive nature
- 6 month growing season (May to October)
- Best root growth at 75 to 85 degrees F soil temp
    - Green-up begins at ~55 degrees F
- Best shoot growth at 80 to 95 degrees F
- Need at least 6 hours of full sun

Special Situation

Fine-leaf Fescues – Chewing and Creeping red

- Shade only
- Well drained soils
- Intolerant to traffic, excess mowing, high temps

B. Grass Seeding or Sodding:

1) Based on Pure Live Seed (PLS)
2) Must have soil contact
3) Avoid planting seed deeper than ¼ inch
4) Water DAILY 3 to 4 times until:
   Seeded: 2 leaf TF; Sod: root pegging
5) Use straw for broadcast seeding to maintain moisture
   1 bale/1000 ft^2

Seeding Rates:

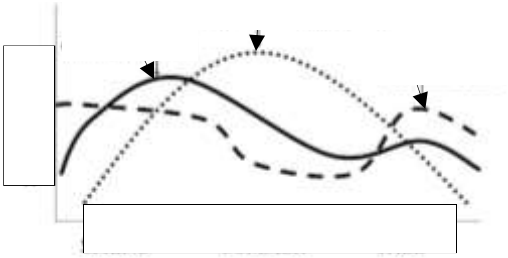
Turf Fescue – Split rate and seed in two directions

- Establishment – 8 lbs PLS per 1000 ft^2 broadcast; 6 lbs PLS drilled per 1000 ft^2
- Over-seeding – 6 lbs PLS broadcast per 1000 ft^2; 4 lbs PLS drilled per 1000 ft^2

Zoysia – Sod or sod plugs only

- Sod plugs – 2 plugs per square foot

Graph 1: Growth of Lawn Grasses



Seeding Dates:

Seeding TF:

- September to mid-October – reasons are limited weed pressure, cool nights, rain, six months of root growth before summer stress

Sodding TF:

- April/May or September

Sodding Zoysia:

- May/June

C. Lime and Fertilization:

- Lime is not fertilizer! Apply only once according to soil test recommendation. Re-test soil 3 to 4 years after lime application before applying more.
- pH modification is best done at establishment when lime can be tilled into the soil
- Apply no more than 50 lbs of lime/1000 ft^2 per application in established lawn
- Apply fertilizer as recommended by soil test.
- Fertilizer rates are based on pounds of actual plant available nutrient per 1000 ft^2
- Percent actual N-P-K are labeled as numbers on the bag or at you fertilizer supplier.
- *IE: 10-10-10 fertilizer has 10% each of N-P-K. Therefore, 25 lbs of 10-10-10 would contains 2.5 lbs of actual of each N-P-K.*
- Table is nitrogen recommendations in pounds actual N per 1000 ft^2 for standard management

	Sept	Oct	Nov	April	June-Aug
TF	1	1	1	0.5	----------
	May	June	July	August	Spring/Fall
Zoysia	0.5	1	0.5	0.5	----------

D. General Lawn Management:

Mowing - Mowing height influences rooting depth

- TF – 3 to 4 inches year round
- Zoysia – improve uniformity and persistence by varying height
    - Spring prior to greenup – 1 inch
    - Summer – 2 inch
    - September – 2.5 to 3 inches
- Maintained sharp blades reduces plant stress
- Remove only 1/3 of growth when mowing
    - Frequent mowing reduces clumping, potential thatch layers and speeds breakdown of clippings
- Consider a mulching mower
- Yard waste is prohibited in MO landfills

Irrigation – Deep infrequent improves rooting depth

- Measure irrigation output using catch basins
    - 1 inch = 624 gallons/1000 ft^2
- Infiltration rate influences runoff potential
    - Clay – 0.25 to 1 inch per hour
    - Loam – 1 to 2 inches per hour
    - Sand – 2 to 5 inches per hour
- Grass total water requirements
    - TF – 1 to 2 inches per week
    - Zoysia – 0.5 inch per week
- Irrigating early reduces disease potential
    - 4:00 AM to 7:00 AM

Aeration – Improves water, fertilizer and air movement

- Verticutting or power-raking
    - Improves soil-to-seed contact when seeding or renovating turf fescue
    - Remove thatch when ½ inch or thicker
        - Zoysia – early summer
- Core aerator for traffic areas
    - Improves water and fertilizer infiltration and helps root growth
    - Leave cores on surface to breakdown

E. Lawn Pest Management:

Weeds: Refer to *Turfgrass Weed Control for Professionals*, https://extension2.missouri.edu/mx399

- Best weed control is healthy thick lawn
- Use herbicides only when necessary
    - READ AND FOLLOW THE LABEL!
    - AVOID Weed-and-Feed products
- Basic weed control timing:
    - March 15 to April 7
      1) broadleaf weeds – POST applied
      2) crabgrass preventer
    - Summer and Fall – depends

Insects: Refer to *Turfgrass Insects*, https://extension2.missouri.edu/ipm1020

- Most common target – Grubs
- Use insecticides only when a grub problem exists, NOT WHEN MOLE PROBLEMS EXIST!
    - READ AND FOLLOW THE LABEL!
    - AVOID Insecticide-Fertilizer combos
- Managing grubs will NOT manage moles.
- Basic grub timing:
    - July - Inspect brown patches
    - Threshold – 5 to 10 grubs/ ft^2
    - Treat in August with curative insecticide
        - Avoid applying on ½ inch thatch
        - ½ inch rainfall or irrigation ASAP

Disease: Refer to *Identification of Turfgrass Diseases*, https://extension2.missouri.edu/ipm1029

- Poor cultural practices promote diseases
- AVOID – mid-morning to evening watering
- AVOID – over fertilization in spring
- AVOID – improper mowing and thatch buildup
- Fungicides are preventative and must be applied prior to disease development
- Most common disease period is early summer
- Use fungicides only when necessary
    - READ AND FOLLOW THE LABEL!

Moles: Refer to *Controlling Nuisance Moles*, https://extension2.missouri.edu/g9440

- Treating lawns with insecticides is not a sustainable nor successful way of control
- Moles are carnivores, feeding primarily on earthworms as well as grubs, slugs, millipedes, and other, spending life underground
- 2 hour Feed-Rest Cycle in a 24 hour period
- Heightened sense of smell w/ poor eyesight
- Litters in spring: March – April
- Digging speed: 1 foot per minute
    - 1 to 2 moles per lawn can be significant
- Active feeding tunnels change day to day
- Management options: Trapping and Baits
    - Contact a professional trapping service
    - or
    - Identify active tunnels by pushing hole in mound with a handle void of human scent and revisit later to see if filled in
    - Wear disposable rubber gloves to set traps along active run and/or use proper bait designed specifically with earthworm scent for moles
    - Place 5 gallon bucket over set traps