

Spring Lawn Care

It's time to get in
touch with your grass!

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Topics to be covered

- Mowing
- Seeding
- Fertilizing
- Weed Control
- Watering
- Diseases
- Insects

What are your expectations?

- Make sure your expectations align with the resources (time, energy, money) that you have available.
- Make sure your expectations are realistic.
- What is the basis of the “model American lawn?”

Some people want a lawn like this



But spend the resources that it
takes for this -



Turf is an expensive crop

- Soybeans – \$275/acre
- Wheat - \$300/acre
- Grain Sorghum – \$360/acre
- Corn – \$425
- Turf - \$2,250/acre (plus mowing and irrigation costs)

Grass Basics

- Grass is a plant of the sun.
- There's a reason that you don't see grass in forests.
- Cool season grasses need a minimum of 4 to 6 hours DIRECT sunlight per day.
- Warm season grasses need more.



Mowing

- Mowing, or rather improper mowing, is the number one cause of problems in lawns.
- Leaves are the energy source that keep the factory in operation. The longer the leaf, the more energy there is for the plant. Longer leaves also shade the soil to reduce weed competition and reduce water use.

Mowing

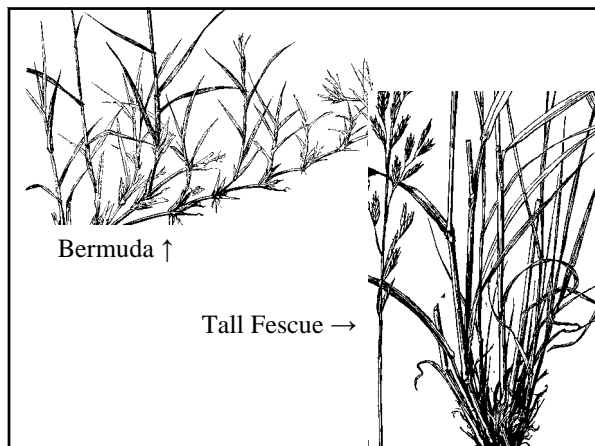
- Longer leaves produce a deeper, more vigorous, more extensive root system.
- Tall Fescue: 3 to 3½ inches tall (or just set your mower as tall as it will go).
- Kentucky Bluegrass – 2½ to 3 inches (KB is a true sod forming grass and hence the slightly shorter mowing height.)

Mowing height is critical

- Not just mowing height, but mowing frequency too.
- Maintain a consistent blade length and the plant will adjust its size accordingly.
- Grow tall, mow very low occasionally causes plants to gain and lose root/plant mass many times a growing season.

Mowing height becomes critical

- Cool season grasses (fescue and bluegrass) need to be mowed taller than warm season grasses (Bermuda, Zoysia, Buffalograss).
- 3 to 3½ inches vs. 2 to 3 inches
- Why???



Mowing height is critical

- In keeping a lawn healthy, and problems minimal, it is important that you keep the soil surface covered (no bare soil), and the plants healthy.
- The first step in achieving the above, is to keep the lawn mowed at the correct height

Mowing

- Think SAFETY! Eye protection and hearing protection, especially with line trimmers.
- Sharpen the blade regularly, about every ten hours of mowing.

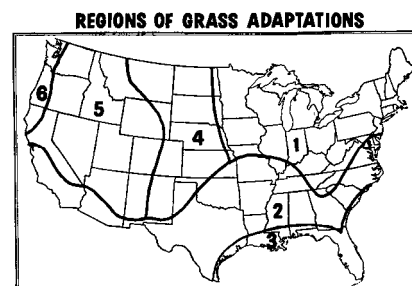
Two types of grasses

- Cool Season Grasses
 - Fescues, Bluegrass, Ryegrass, Bentgrass, Brome grass
 - Start growing early in the season (late February or March), head out in May, dormant to semi-dormant in summer, extensive fall growth.
 - Next spring's growth is dependent on care in September and October.
 - Preferred temperatures in the 60s and low 70s.

Two types of grasses

- Warm Season Grasses
 - Bermuda, Zoysia, Buffalograss, St. Augustine, Centipede, Bahiagrass
 - Start growing in late April and early May – head out in late June, July and August, go dormant by late September.
 - Next year's growth is dependent on winter weather (cold temperature damage) and fertilization in May and June.
 - Preferred temperatures in the 80s.

When it comes to what grass variety to grow, we live in the Twilight Zone!



Grass Varieties to Consider

- Tall Fescue
- Kentucky Bluegrass
- Bermudagrass
- Zoysia
- Buffalograss

Tall Fescue



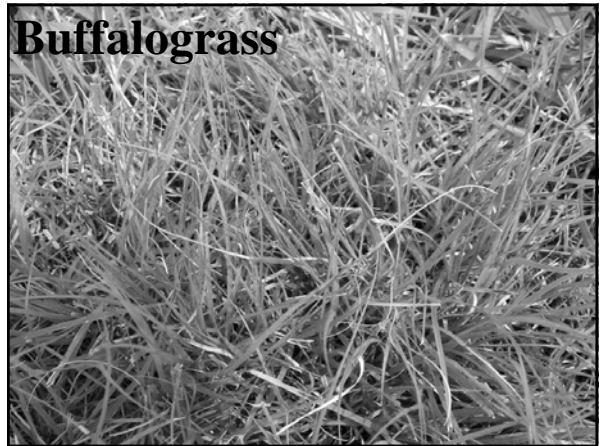
Kentucky Bluegrass



Bermudagrass



Buffalograss



Grass Varieties NOT to Consider

- Ryegrass (perennial or annual)
- Creeping Red Fescue
- Hard, Sheep or Chewing's Fescue
- Bentgrass
- St. Augustinegrass
- Centipedegrass
- Bahiagrass

Establishing a cool season lawn

- Tall fescue - plant in September or very early April
- 6 to 8 pounds per 1,000 ft²
- Kentucky Bluegrass – same planting time as tall fescue
- 2 – 3 pounds per 1,000 ft²
- Plant both about 1/8 inch deep.
- Sowing on top of ground not effective!!!

Establishing a warm season lawn

- Establishment occurs mid May to mid June
- Zoysia – must be sodded, plugged or sprigged.
- Buffalograss – 1 to 2 lbs per 1,000 ft²
- Bermuda – sodded, plugged or sprigged. If seeding, must use Yukon or Riviera, maybe Mohawk – 1.5 to 3 lbs per 1,000 ft²

Planting Rate is Critical

- Strict adherence to these rates is critical.
- One plant per square inch is adequate.
- Planting rates that are too thick will look great when they first come up, but after a few weeks, the plants will start to kill each other out from competition.

If you are seeding....

- Plant as early in September or April (cool season lawns, of course) as possible.
- Grass seed must be covered by the soil (power seeders can be rented and they are wonderful devices!)
- Pay attention to what you buy



All seed must be labeled

SUN & SHADE MIX, BRAND GRASS SEED MIXTURE
NET WGT. 3 POUNDS

PURE SEED

38.89% LINN PERENNIAL RYEGRASS
29.29% BOREAL CREEPING RED FESCUE
27.34% KENBLUE KENTUCKY BLUEGRASS

OTHER INGREDIENTS

2.11% OTHER CROP SEED

2.28% INERT MATTER

0.09% WEED SEED

NOXIOUS WEEDS: NONE FOUND

THE SCOTTS COMPANY

MARYSVILLE, OH 43041

GERMINATION

90%

85%

87%

ORIGIN

OR

CAN

WA/ID

LOT NO: 9527

TESTED: JAN 1999

AMS 1101
133755

Kansas Premium Tall Fescue Mix

LOT NO M16M-1-001

VARIETIES

WolfPack Tall Fescue

Tar Heel Tall Fescue

Apache II Tall Fescue

Coronado Tall Fescue

Millennium Tall Fescue

PURE SEED

19.99

19.07

19.88

19.97

19.86

ORIGIN

CDN

CDN

OR

OR

OR

OVERALL GERMINATION 86% 02/01

OTHER INGREDIENTS:

OTHER CROP SEED 0.00

INERT MATTER 0.44 NET WEIGHT: 10 LBS.

WEED SEED 0.00

NO NOXIOUS WEED SEED FOUND

Gard'N Wise

1515 East 29th North

Wichita, KS 67219

C & MS 522

Tag #: 6 52/1220

After seeding -

- Once the seed starts to imbibe water and swell, it must be kept moist. If it dries out, it's dead!
- What we do for a new seeding is far different than for established lawns.
- Water daily or even twice daily to keep seeds and soil seed zone moist.
- Once new shoots are up an inch, start reducing frequency but increase amount.

After seeding -

- Don't mow UNTIL the desired height is reached.
- Clipping action of the lawnmower actually stimulates the plant to produce more tillers/leaves.
- Mulching may be more of a hassle than it's worth.
- We'll deal with weeds later.

Grass Gets Hungry

- Nitrogen makes vegetative growth and the dark green color. Very mobile nutrient, moves with soil water.
- Phosphorus encourages root development and overall growth. Native soils are very low in phosphorus – does not move with soil water. Most common deficient nutrient in new lawns. Very poor growth after emergence, grass just “sits there”.

Grass Gets Hungry

- Many of our soils are neutral to high pH – ideal would be 6.5.
- Tall fescue tolerates a wide pH range 4.7 to 8.5.
- Kentucky Bluegrass is less tolerant, 6.0 to 7.2 – higher pHs cause iron chlorosis (yellowing of leaves).
- Can lower pH with applications of sulfur.

Get the lawn started right!

- Soil test a couple weeks before planting.
- If lime or sulfur is needed, it must be incorporated prior to planting.
- Low phosphorus soils are very common in new housing developments that used to be pastures. Application and or incorporation of starter fertilizer very important.

Fertilizer 101

- All fertilizer **MUST** show composition.
- N-P-K
- Nitrogen (N) – Phosphorus P_2O_5 – Potassium (K_2O)
- Starter fertilizers have high phosphorus and low to moderate nitrogen, i.e. 11-52-0.
- Our soils are rarely low in potassium.

Common Fertilizers

- | | |
|---------------------|----------------|
| ● 13-13-13 | ● 25-0-6 |
| ● 11-52-0 | ● 29-3-3 |
| ● 24-3-12 | ● 24-2-12-N(S) |
| ● 46-0-0 | ● 18-0-6 |
| ● 27-3-12-7(S) | ● 24-0-10 |
| ● 32-2-8-4(S)-2(Fe) | ● 30-3-3 |
| ● 9-13-7 | ● 18-3-15 |
| ● 26-3-4 | ● 23-3-8 |

Feeding Time

(cool season grasses)

- Don't bag your clippings. Recycle them and recycle the nutrients.
- Fertilize in early September – apply phosphorus if needed.
- Fertilize in late October (weed and feed – usually high nitrate) .
- Winterizer??????

Feeding Time

(cool season grasses)

- Fertilize in late March/early April and include crabgrass preventer – moderate N rate if possible. (*Optional*)
- Fertilize lightly in early to mid May – use slow release N source. (*Optional*)

Weeds

- Annual vs. perennial, grass vs. broadleaf
- Weeds are a **SYMPTOM** of the problem, not **THE** problem.
- The problem is generally thin lawns with bare soil.
- If you keep your lawn thick and mow it tall so that ground is shaded, you will have fewer weed problems.

Weeds – important concepts

- There are winter annual weeds and summer annual weeds.
- Weed seedlings are much easier to kill than mature plants that are blooming/heading.
- Perennial weeds are a different breed that are best tackled one on one – field bindweed and western ragweed are common.



Winter Annual Weeds

- Sprout in the fall, overwinter as a small inconspicuous plant, grow like heck in the late winter and bloom early, then die
- Henbit (purple flowers)
- Speedwell (blue flowers)
- Chickweed (white flowers)
- Dandelion (yellow flowers) a perennial
- Easiest to kill in late October.



Summer Annual Weeds

- Sprout in the spring after air and soil warm up. Can sprout clear into early August and still produce seed.
- Grow slowly at first, then gain speed. Will do everything possible to produce seed before frost.
- Die with the hard freezes of fall.
- Best controlled with pre-emergent herbicides.
- New products give us some post emerge control.

Summer Annual Weeds

- Crabgrass
- Foxtail
- Barnyardgrass
- Grass Sandburs
- Puncturevine
- Spurge

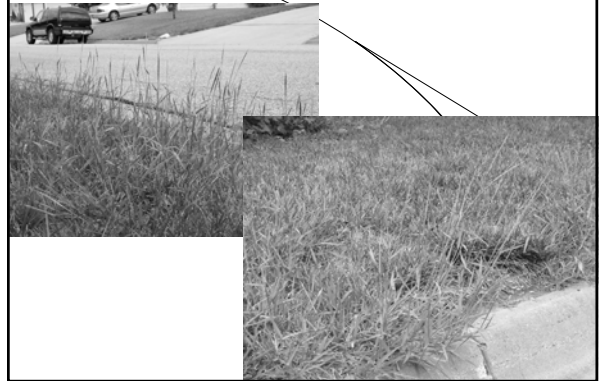
Crabgrass



Crabgrass



Crabgrass



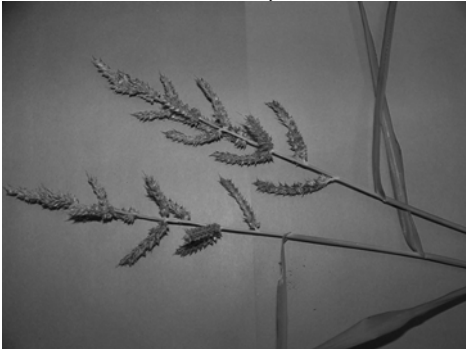
Crabgrass



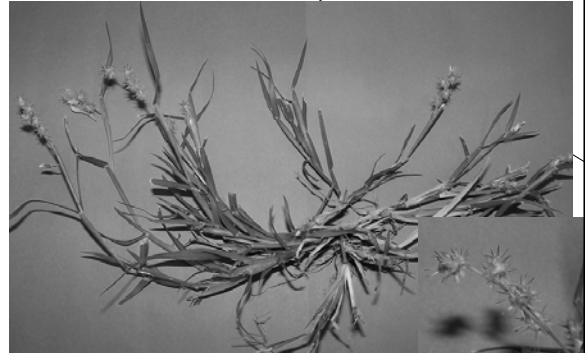
Foxtail



Barnyardgrass



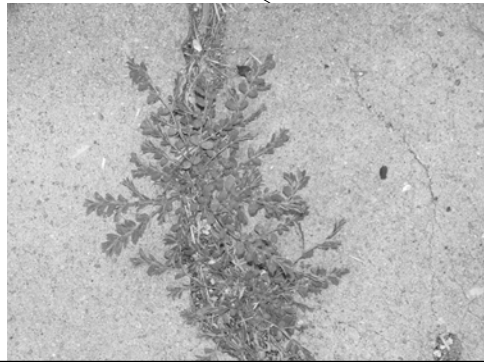
Grass Sandburs



Puncturevine



Spurge



Troublesome Weeds

- Some grassy weeds have growth habits exactly like the lawn grasses we are trying to grow, OR start growing at a time that we aren't thinking about dealing with them!
- Orchardgrass
- Nimblewill
- Goosegrass
- Little Barley

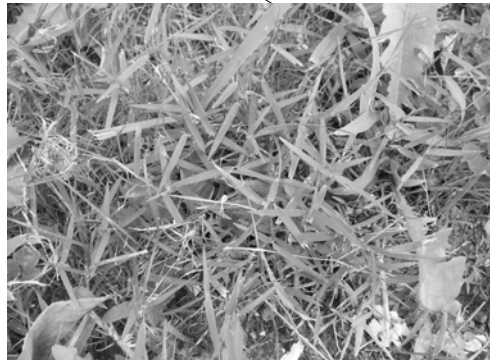
Orchardgrass



Orchardgrass



Nimblewill



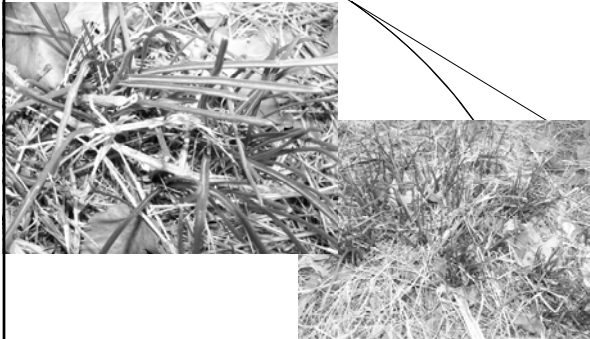
Goosegrass



Control of these

- Orchardgrass and Nimblewill are perennial. No selective control – must treat with glyphosate and reseed.
- Goosegrass and Little Barley are winter annuals. Treat in the late summer with pre-emergent chemicals to prevent germination.

Star-of-Bethlehem



Star-of-Bethlehem

- A true “bulb plant” just like tulips, etc.
- Control is difficult
- Turflon Ester, Speed-Zone or Weed-free-zone.
- Glyphosate, but it WILL kill everything.

Controlling broadleaf weeds

- Winter annual controlled by post-emerge herbicides.
- Summer annuals partially controlled by “crabgrass preventer” herbicides.
- Post emerge products are generally growth regulators and vapors can drift, causing leaf distortion in sensitive plants

Broadleaf Weed Herbicides

- 2,4-D
- Dicamba
- Mecoprop (MCP)
- Triclopyr
- Carfentrazone/Sulfentrazone
- Quinclorac

Grassy Weeds

- Much easier to prevent (pre-emerge) than kill (post-emerge).
- Products must be applied and activated before germination is initiated.
- Activation usually requires ½” of rain or equivalent irrigation followed by 7 to 10 days.
- Forms barrier that should not be disturbed.

Grassy Weed Preventers

- Balan
- Trifluralin
- Pendamethalin
- Dimension
- Barricade
- Timing is critical as is length of control and retreatment requirements.
- Must be careful in using these if planning to reseed or overseed!

Grassy Weed Killers

- These are very limited and best control is obtained with very small weeds.
- MSMA
- Quinclorac
- Bermudagrass control products – fairly new – most use fenoxaprop-p-ethyl. I have not had a chance to evaluate (Bayer Advanced). Also controls crabgrass, foxtail, etc.

Sedges (a.k.a nutsedge)

- Grass like plants with triangular stems.
- Reproduce by seed and bulblets (nutlets).
- Tolerate lower light environments than grass
- Pulling dislodges and activates bulblets.
- Roundup (glyphosate) works but is brutal (scorched earth).
- Sedgehammer, expensive but selective.

This spring....

- If weeds were not controlled last fall, or you still have weeds, treat with a herbicide or a weed and feed (the latter if fertilizer was not applied last fall.)
- Probably a little early for crabgrass preventers.

Crabgrass Preventers

- HAVE to be applied pre-germination.
- 1st generation vs 2nd generation herbicides
- 1st generation are products like Balan, Trifluralin, and Pendamethalin. Very short residual activity: 6 to 12 weeks
- Apply at redbud bloom and then reapply as indicated on the label for season long control.

Crabgrass Preventers

- 2nd generation products: Dimension and Barricade.
- These have much longer control windows – up to 8 months – 5 months is the common rate. CAN BE APPLIED NOW.
- Both are also safe to use around established landscape plants.

Barricade

- Can be used as a late fall treatment at heavier rates.
- Needs to be applied and activated with 1/2 inch of rainfall/irrigation at least 14 days prior to crabgrass germination.
- Controls some summer annual broadleaves.
- Gives excellent crabgrass control.
- Labeled for use on buffalograss.

Dimension

- Can be used as a fall treatment at heavier rates.
- Does provide some post emerge crabgrass control. Limited – plan to apply early!
- Has a broader label of weeds controlled and does include sandburs!
- Labeled for use on buffalograss.
- Crabgrass preventers do not stop Bermuda

Crabgrass in new lawns?

- One product is labeled for annual grass control in new grass seedings.
- Tupersan (siduron) can be applied at (after) planting but before grass or weeds emerge.
- May be difficult to find!
- Post emerge products can be used after grass is well established (late summer).

Watering

- Fescue and bluegrass lawns will try to go dormant in the summer, especially if it is hot and dry.
- This only happened briefly, in 2009.
- If you apply lots of irrigation water, you can keep them from going dormant.
- But you don't have to.

Watering

- Fescue and bluegrass can go totally dormant, look absolutely dead, and still come right out of it once cooler, wetter weather returns.
- You must stay off the lawn to avoid damaging the crowns as they dry out.
- Applying 1" of water per month will help protect the crowns of the plants.

Watering

- Roots will grow where there is water. If you irrigate a little bit every day, you will only keep the top inch of soil damp and that is where the roots will grow.
- Water once every 3 to 5 days and water deeply - ½ to 1 inch of irrigation.
- Forget "X minutes", put out rain gauges to see how much water you are applying.

Diseases

- Generally more of an annoyance than a problem.
- Brown Patch in tall fescue can look really bad, but only kills the leaves. New growth will appear after the weather cools down.
- Rust in fescue
- Slime mold – not a disease
- Powdery mildew in bluegrass

Insects

- Far more people treat for grubs than really have a grub problem.
- Don't waste your time or money until there's a grub problem.
- Evidence of grub problem is dead spots in lawn that peel up like cheap carpet, lots of skunk or bird activity in your yard.
- Chinch bugs, armyworms, nightcrawlers

Core Aerating

- Plugs of soil are removed 3 to 6 inches deep.
- Allows fertilizers, lime or sulfur to get "into" the soil.
- Helps to relieve compaction.
- Cores break down and disappear in a few weeks.



Power Raking

- Baldes slice through the sod, thatch and soil surface to help pull up some of the thatch and bust the thatch layer open to encourage it to break down.
- We probably need to do more core aerating and less power raking.
- Do both in early fall or in the spring PRIOR to applying crabgrass preventer

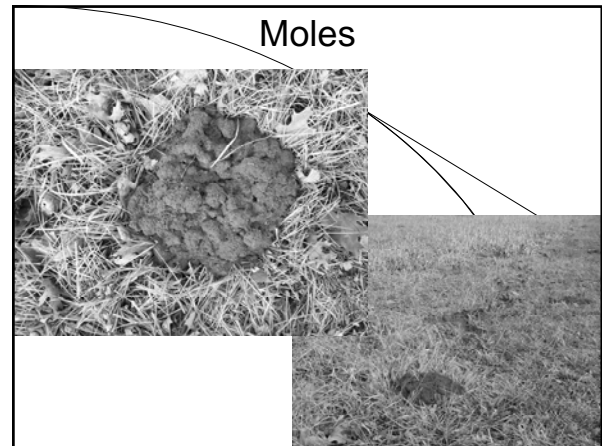
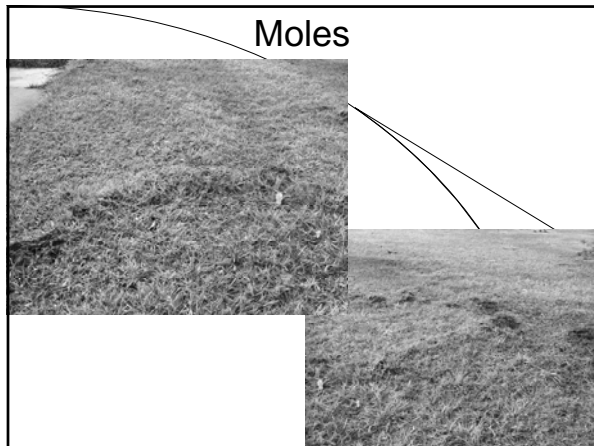


Other issues

Fairy Rings (mushrooms)

- Fungal organism decaying organic matter underground.
- Strongly associated with tree roots.
- Mushroom (toad stool) is the fruiting body that spreads more seeds (spores) of the fungus.
- There is no practical treatment.



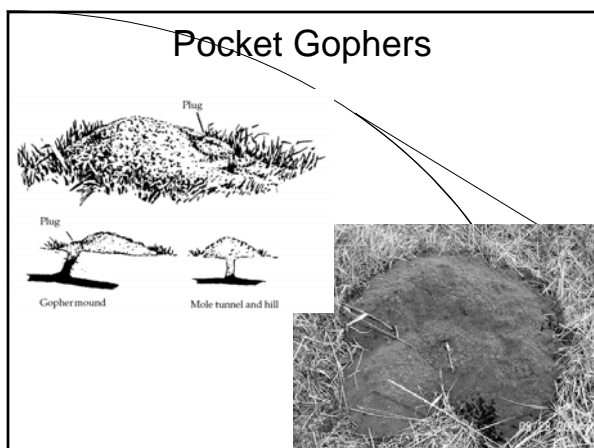


Moles

- Raised underground runs
- Ground feels spongy underfoot
- Never an open entrance into tunnels
- Will push soil up to surface from deeper excavated tunnels – like a volcano
- Moles are insectivores

Moles

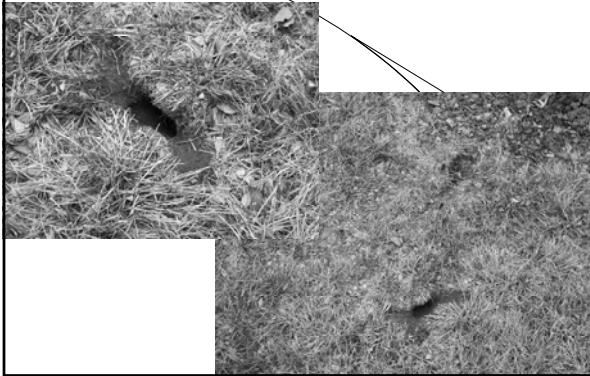
- They swim through the soil and when their sensitive snout touches an insect like critter that moves, their mouth chomps down on it.
- Trapping is only reliable control.
- Everything else is hit and miss and highly unreliable.
- Stomp down tunnels to re-establish root/soil contact.



Pocket Gophers

- Pure herbivore
- Piles of freshly “ground” dirt
- Never an open entrance
- Feeds on underground taproots
- Trapping or baiting

Voles



Voles

- A small mouse like rodent.
- Currently in a population upswing.
- More of a nuisance than a serious problem.
- Trapping (mouse traps) or baiting.
- Will always have an open entrance to tunnels.

The top 3 things for a better lawn.

- 1. Mow tall
- 2. Mow tall
- 3. Mow tall

Parting Thoughts

- Don't be a lawn-aholic
- Your lawn should add to the enjoyment of your home.
- If it's a constant struggle you're either doing something wrong, or you need to adjust your expectations!

Questions?

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