How can I best manage lawn pests?

Integrated Pest Management (IPM) is an environmentally sensitive approach to managing pests (disease, insects and weeds). It combines a variety of strategies and tactics to manage pest levels below an economic threshold. Some IPM practices specific to turfgrasses include:

- Raise your mowing height in shaded areas to retain more leaf surface. This helps the turf absorb light.
- Do not over-fertilize grass, especially in shaded areas. Shaded areas need 20 to 50% less fertilizer than turf in the sun.
- Do not over-water the lawn. Water deeply after dew development and before sunrise. Excess moisture can lead to run-off and disease development.
- Control weeds along fence rows, banks, driveways and sidewalks. They produce seeds that may infest grass.
- Encourage beneficial insects and predators, such as birds, spiders and toads to your lawn for natural pest control. See Resources web site for more information.
- Irrigate, aerate, mow, and fertilize as recommended to encourage turfgrass health and to reduce the competition with pests.
- Mulch ornamental plants to control weeds from developing and spreading into turfgrass. Hoe and hand-remove weeds in non-mulched beds of annuals and perennials to prevent them from entering turfgrass.
- Remove thatch when it exceeds a depth of 1/2 inch. Thatch at this depth enhances disease and harbors insect pests.

Pest levels below an economic threshold. Some IPM practices specific to turfgrasses include:

Books
Weeds of Southern Turfgrass, Tim R.Murphy, UGA College of Agricultural & Environmental Sciences, Cooperative Extension Service.

Bulletins and Fact Sheets
Centipedegrass, Gil Landry and Tim Murphy, Leaflet 313, UGA College of Agricultural & Environmental Sciences, Cooperative Extension Service, June 1997.
Lawns in Georgia, Gil Landry, Bulletin 773, UGA College of Agricultural & Environmental Sciences, Cooperative Extension Service, April 2000.
Tall Fescue Lawn Management, Gil Landry, Leaflet 354, UGA College of Agricultural & Environmental Sciences, Cooperative Extension Service, April 2000.
Turfgrass Water Management, Gil Landry, Leaflet 399, UGA College of Agricultural & Environmental Sciences, Cooperative Extension Service, April 2000.

Web Sites
All Georgia CES publications available at www.ces.uga.edu/ces/pubs.html
Georgia turf page: www.georgiaturf.com
Disease diagnosis and control methods: www.ces.uga.edu/Agriculture/plantpath/planteis.html
Weed identification and control methods: www.griffin.pearchnet.edu/cses/TURF/turf.htm
Insect pests and benefits: www.griffin.pearchnet.edu/caes/lpmhome/homepage.html

Which turfgrass should I use for my lawn?
The most important factor in developing and maintaining a problem-free lawn is to choose a grass that is adapted to the site and has the qualities you desire. Georgia possesses a variety of soils, climatic conditions and other environmental factors. A grass that grows well in north Georgia may not be adapted to the coastal plains of south Georgia. Choose the best turfgrass for the region and the landscape situation. Following are the most common types of grasses used by Georgia homeowners for their lawns. These are grouped as either cool or warm season grasses.

Cool season grasses grow well in temperatures of 60° to 75°F. An example is tall fescue.

Tall fescue is well suited to the upper Piedmont and mountain areas. It may require more water than warm-season grasses and may thin out over time. Tall fescue can tolerate both full sun and partial shade. It should be established in the fall by seeding or sodding.

Warm season grasses grow best in temperatures 80° to 95° F. Examples include bermudagrass, centipedegrass, zoysiagrass, and St. Augustinegrass.

Bermudagrasses thrive in hot weather and perform poorly in shade. Bermuda is adapted statewide and can be established by seeding (common bermuda) or sodding (hybrid bermuda). Generally, hybrid bermudagrasses have more disease and weed resistance, greater turf density, and a finer texture than common bermuda. Bermudagrass is successfully established in late spring to early summer.

Centipedegrass is a slow-growing, aggressive grass that produces a dense, attractive, weed-free turf. It is more shade tolerant than bermudagrass but less shade tolerant than St. Augustinegrass or zoysiagrass. It grows well in south Georgia and can survive as far north as Athens.

Zoysiagrass performs well in Georgia and forms an excellent turf when properly managed. Zoysiagrass tolerates a fair amount of shade as well as full sun. In general, it is slower to establish than bermudagrass and requires more frequent irrigation.

St. Augustinegrass has large, flat stems and broad, coarse leaves. It is the most shade tolerant of the warm season grasses. St. Augustinegrass is susceptible to winter injury and should be planted with caution as far north as Atlanta.

When choosing a warm-season grass to establish, consider:

- How tall it grows
- Resilience to drought
- Resistance to turfgrass diseases
- Acceptability to birds
- Acceptability to pets
- Cost of establishment
- Cost of maintenance
- Goal of the landscape (e.g., sports field, formal garden, recreation area)
- Type of soil and drainage
- Amount of irrigation and fertilizer
- Local climate

It is also important to consider the specific conditions of your site. For example, if you live in an area with high levels of air pollution, you may want to choose a grass that is more tolerant to pollution.

Conclusion
Choosing the right grass for your lawn is an important step in maintaining a healthy, beautiful landscape. By considering factors such as climate, soil type, and your personal preferences, you can select the grass that is best for your needs.

Garden to Protect Water Quality

Care of Turf
A Homeowner’s Guide

As rain and irrigation water wash over the land, they carry soil, fertilizer and pesticides from our yards into storm drains and surface water. The collective effect is the pollution of Georgia’s watersways, especially in urban areas where the population density and the paved surface are greatest. The Garden to Protect Water Quality series provides homeowners practices to improve soil structure, to minimize chemical inputs, and to reduce erosion and runoff while maintaining the beauty of their landscapes.

A well-maintained turf can reduce surface runoff and nonpoint source pollution of rivers, streams, and lakes. Research shows that 15 times less water flows off turfgrasses that are carefully managed and maintained. The root system of healthy turfgrasses holds soil in place and prevents soil erosion and pollution of watersways with sediments. The root zone also facilitates the biological breakdown of various organic pollutants. For comprehensive information on Georgia turf, visit www.georgiaturf.com
How do I install seed, sod, and sprigs?

Whether seeding, sprigging, or sodding, be sure the source is
¥ Water fertilizer in lightly prior to planting.
¥ Mix fertilizer with the top 1 to 3 inches of soil. This places fertilizer in the
¥ If the existing topsoil is poor, improve it with new topsoil. Spread 8 to 10
¥ Provide proper water drainage. Grade area to a 1 to 2% slope
¥ Remove all debris such as rocks, bottles, tree stumps and other wood.
¥ Obtain soil samples to determine fertilizer and lime requirements. Contact your local County Cooperative Extension Service Agent for information.

How much should I mow?

Regular mowing with a sharp blade set at the proper height is very important. Vigorous growth covers the soil surface reducing the chances of erosion. Mowing too low or scalping the turf stresses the grass plants, creating an opportunity for pest and weed invasion. Please see the below chart for mowing height for Georgia lawn grasses.

- Remove no more than one-third of the plant material. Grass clippings do not increase thatch build-up, if it is moved when needed. Grass clippings should consist primarily of leaf blades which decompose quickly.
- Return grass clippings to the lawn whenever possible. They provide a valuable source of nitrogen for the grass. Recycling grass clippings reduces yearly fertilizer applications by one third to one half.
- During the summer, increase the mowing height by one-half inch to improve the lawn’s ability to tolerate drought and stress.
- Sharpen or replace mower blades to maintain smooth cuts. Dull blades shred leaf tips causing turf to use more water and suffer undue stress.
- Do not leave clippings on the pavement where they can wash into a water source.

Mowing height for lawn grasses in Georgia

<table>
<thead>
<tr>
<th>Grass</th>
<th>Cutting Height (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tall Fescue</td>
<td>2 - 3</td>
</tr>
<tr>
<td>Common Bermudagrass</td>
<td>1 - 2</td>
</tr>
<tr>
<td>Hybrid Bermudagrass</td>
<td>0.5 - 1.5</td>
</tr>
<tr>
<td>Zoysiagrass</td>
<td>0.5 - 1.5</td>
</tr>
<tr>
<td>Centipedeagrass</td>
<td>1 - 1.5</td>
</tr>
<tr>
<td>St. Augustinegrass</td>
<td>2 - 3</td>
</tr>
</tbody>
</table>

How can I maintain an attractive lawn?

Many factors influence the amount and frequency of water needed for turfgrass. Soil type, type of grass, fertility level, frequency of rain, temperature, wind, and humidity affect the amount of water needed to maintain turfgrasses. Excess fertilization and hot, windy days increase demand for water, while low-level fertilization and cool, cloudy days tend to decrease demand for water. Apply water just before wilt occurs when most grasses appear dark and dull and the blades begin to fold or roll. Over-watering increases the surface runoff potential and can increase the incidence of disease. Refer to publication, Turfgrass Water Management, for more information on irrigation turfgrass.

Water when needed and not on a schedule. Apply only the amount of water the ground can absorb. Excess watering may lead to surface runoff.

Establishing turfgrasses - Water daily with up to one-fourth inch of water for the first 4 weeks. As the plants begin to take root and grow, decrease the frequency of watering and increase the amount applied each time.

Establishing established turfgrasses - Apply one inch of water per week during active growth. This may require two irrigation periods in one week if runoff is a problem.

Maintaining established turfgrasses - Water daily with up to one-fourth inch of water for the first 4 weeks. As the plants begin to take root and grow, decrease the frequency of watering and increase the amount applied each time.

Maintaining established turfgrasses - Apply one inch of water per week during active growth. This may require two irrigation periods in one week if runoff is a problem.

Fertilize cool season fescue in the fall. Fertilize warm season grasses in the spring and in the fall. Make the spring application when the turfgrass is about 50% green except for centipede which should be fertilized after it becomes green. The fall application should be made about 6 weeks before the average first frost date. See management calendar insert.

Lime - Lime is used to raise the soil pH. Most turfgrasses grow best at a pH level between 6.0 to 6.5. Use a dolomite source of limestone because it supplies magnesium as well as calcium. Fall is the preferred time for application because winter rainfall helps activate the lime in the soil. However, it can be applied any time. Apply lime according to soil test recommendations.