



Bay-Friendly Lawn Care

How To Maintain Healthy Lawns and Gardens
While Protecting Pleasant Bay
And Other Coastal Estuaries

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Think Outside the Box

- What is the purpose of each type of planting in your yard?
 - What is your lawn used for?
 - How much lawn is needed?
 - Can you reduce the lawn size?
 - Does the entire lawn need to be picture perfect?
- What do you really need? What could be removed or changed to reduce impact?



Lawns

- Completely unnatural monoculture.
- Require more inputs and more maintenance than almost any other type of planting.
- Usually encompass the largest part of the landscape.
- Expectations are incredibly high, and very difficult to meet.
- Marketing and education have been geared toward selling more product.



An Intelligent Approach

- Use all available information to make *smart* choices about how to care for your lawn.
- Work *with* nature and consider the turf's needs from *it's* point of view.
- Provide the grass with everything it needs to achieve it's full genetic potential.
- Be proactive, and create a system which reduces or eliminates problems for the long term.
- Create a self-sustaining system which reduces the need for additional fertilizer applications.



The “Conventional” Approach

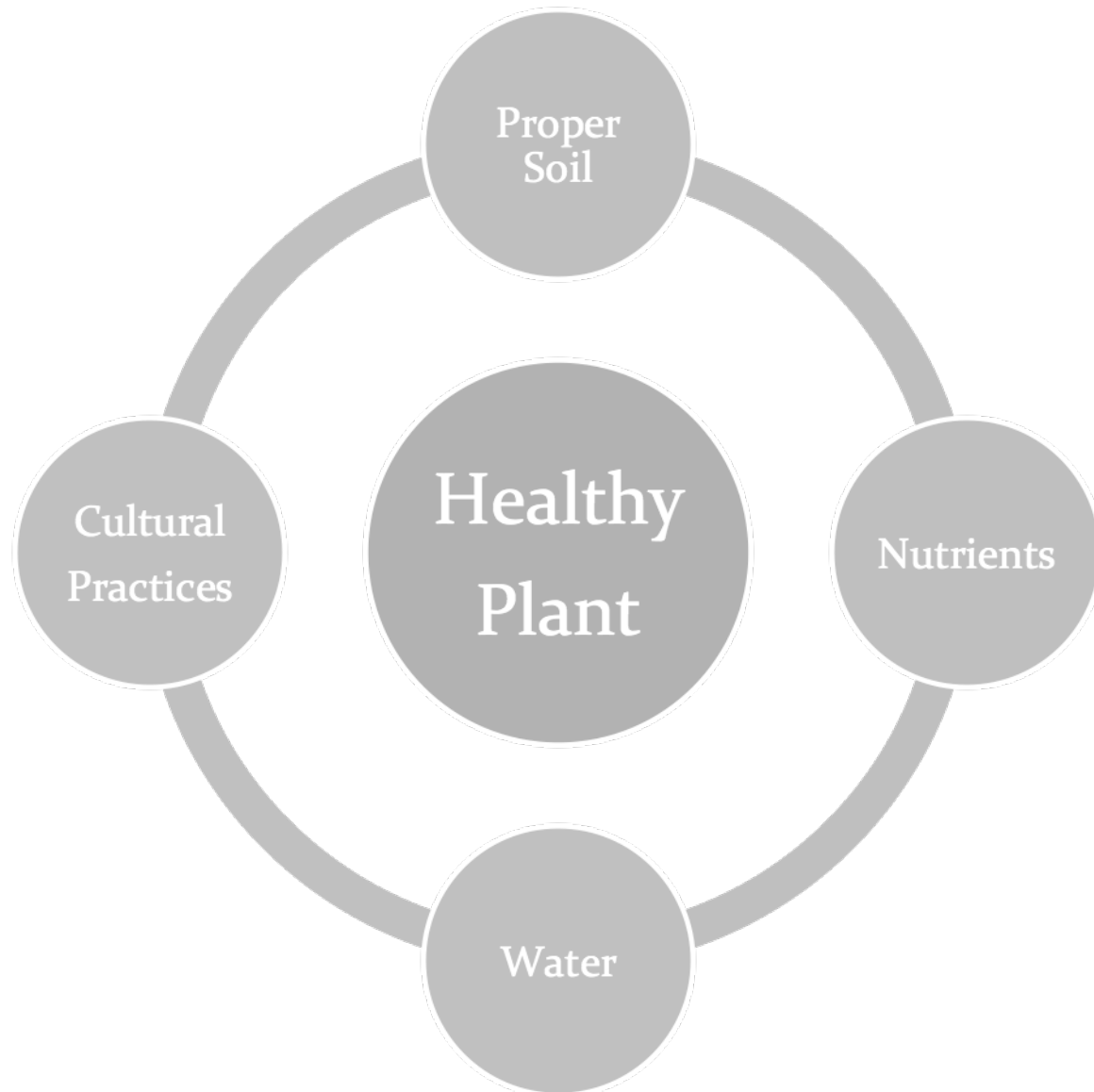
- Apply products based on the calendar, not on the needs of the plant.
- React to problems when they occur, rather than minimize problems with proactive methods.
- Apply short-term, “Band-Aid” fixes to problems, rather than address the root cause and find a long-term solution.
- Plants become reliant on you for most of their nutritional needs.



How To Be Intelligent

- **Soil Test-** Have laboratory soil tests performed on a regular basis. (UMass or private lab)
- Follow cultural practices carefully
 - Watering
 - Mowing
 - Aerating
 - Overseeding
- Fertilize based on soil test.
- Encourage a healthy soil foodweb.
- Have realistic expectations.

The Integrated System





Soil Tests

- Why test the soil?- The soil test is the road map to get where you want to go.
- Where do I get it tested?- UMass (Std. Test w/Organic Matter) or private lab. Follow directions!!
- How do I read the results?-
 - pH- 6.8 for lawns. Use their recommendation. Never more than 50 lbs./1,000 sq. ft. in one application.
 - Organic Matter- Add compost if necessary. Lawns- 5-7%
 - Ca:Mg Ratio- 7:1 for lawns- Use the correct lime- calcitic or dolomitic, or gypsum if pH is good.



Cultural Practices

- Core aeration on a regular basis is the BEST thing you can do for your lawn. Grass will never grow well in compacted soil.
- Overseeding your lawn every year or two is the BEST thing you can do for your lawn. Fill in bare spots and keep your lawn young. Out-compete the weeds.
- Mowing high is the BEST thing you can do for your lawn. Deeper roots and fewer weeds.

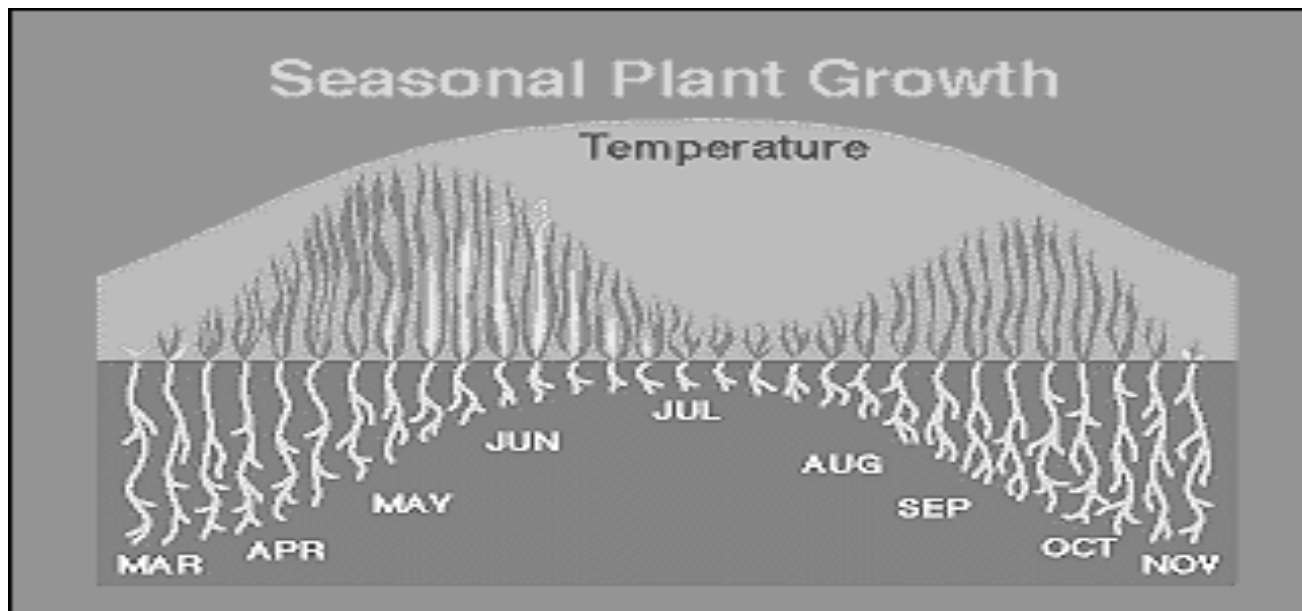


More Cultural Practices

- Leave the clippings! It's the BEST thing you can do for your lawn. Free Nitrogen and organic matter.
- Mowing your leaves in the fall is the BEST thing you can do for your lawn. Free organic matter, and less raking!
- Watering once per week, 1" per watering, is the BEST thing you can do for your lawn- unless you like weeds, moss, insects, and disease. (If that's the case, then return to "Conventional Approach.")

Fertilizing Lawns


- Cool-weather grasses have 2 periods of heavy growth each year- spring and fall.
- Target fertilizer applications to provide needed nutrients at these times.





Nitrogen

- Lawns need a steady supply of Nitrogen in spring and late summer for greening and growth.
- Fertilizers with a high percentage of Water Insoluble Nitrogen (WIN) provide lawns with the Nitrogen they need, when they need it.
- Most organic fertilizers have a high percentage of WIN.
- Biologically enhanced fertilizers leach even less, while providing many other benefits.
- Most synthetic fertilizers are often low in WIN, and only feed the lawn for 3-4 weeks.
- Unused, soluble Nitrogen quickly leaches away from root zone.



Intelligent vs. Conventional

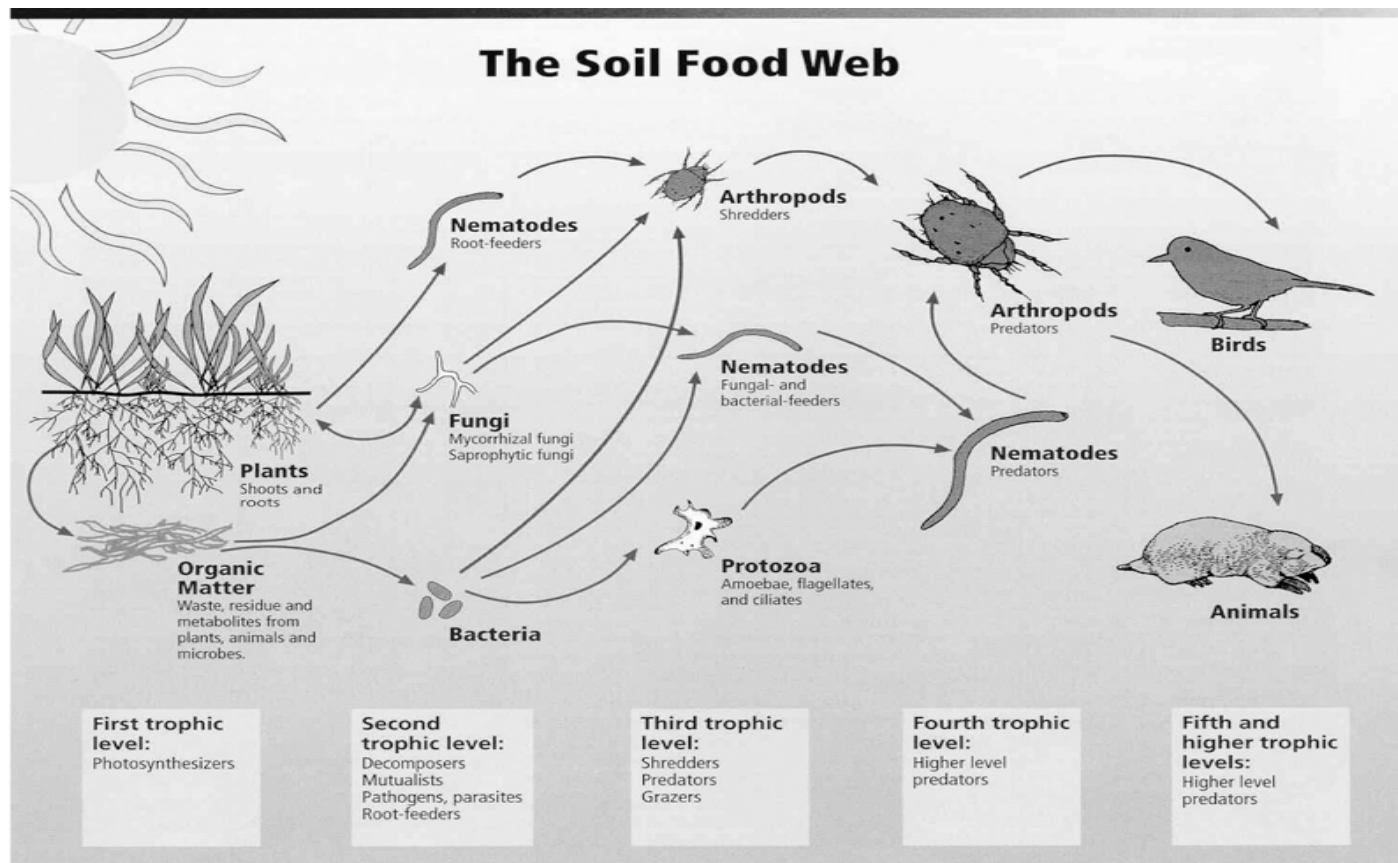
- 3-5 Lbs. of Nitrogen is applied per 1,000 sq. ft. in a conventional program each year. Most of this is water soluble Nitrogen that readily leaches.
- “Bridge Programs” that wean lawns from synthetic to organic products use 2- 2 ½ lbs. of Nitrogen per 1,000 sq. ft. Mostly WIN (Water Insoluble Nitrogen).
- Typical organic programs apply 1 ½ -2 lbs. of Nitrogen per 1,000 sq. ft. Mostly WIN.
- Long-established intelligent lawns often apply 0-1 lbs. of Nitrogen per 1,000 sq. ft. Mostly WIN.



Phosphorous

- Essential for root development.
- Needed for lawn establishment, then in small amounts.
- Most synthetic Phosphorous is never absorbed by roots.
 - Leaches away
 - Binds with other nutrients
- Major culprit in algae bloom in fresh water ponds, lakes and streams.

The Soil Foodweb



Relationships between soil food web, plants, organic matter, and birds and mammals
 Image courtesy of USDA Natural Resources Conservation Service
http://soils.usda.gov/sqi/soil_quality/soil_biology/soil_food_web.html.



Soil Biology

- “Any lawn care program that fails to address soil biology is destined to fail.”
- Beneficial microbes create healthier plants by:
 - Solubilizing nutrients.
 - Fortifying immune systems and defenses.
 - Breaking down thatch and clippings into plant nutrients and organic matter.
 - Retaining moisture.
 - Preventing disease.
 - Improving soil structure.



Increasing Soil Biology

- Limit use of synthetic fertilizers and pesticides—especially fungicides.
- Apply top-dressing of high-quality compost, especially after aerating.
- Look for products containing humates and kelp, which help support beneficial microbes.
- Apply microbial products, or compost tea, on a monthly basis, or more often, if needed.



Realistic Expectations

- What are the expectations for this lawn? How is it used and how intensively does it need to be maintained?
- Were things REALLY better when a conventional program was used?
- What has the weather been like?
- What are other lawns looking like?
- Are ALL aspects of the intelligent approach being utilized? What is the reason results are not as good as anticipated?



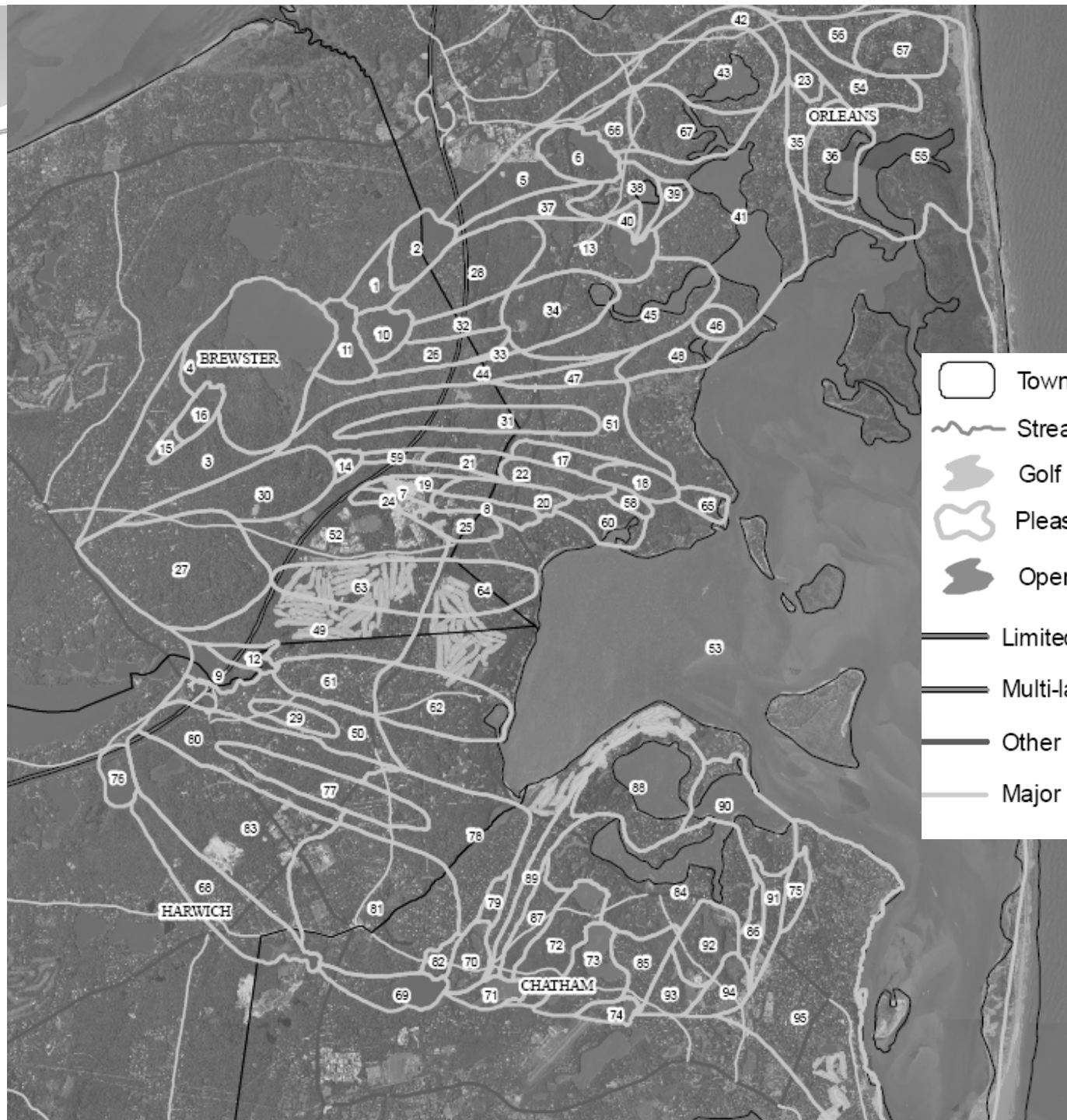
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Final Thoughts

- This approach works! There are too many examples of success to be able to accept failure.
- There is ALWAYS a reason if you don't have good results. Find the cause and fix it.
- Don't put on those rose-colored glasses and dream of "the good old days."
- Keep an eye (and mind) open for future products- we have only just begun to find things that truly work!
- Talk to your friends and neighbors. Share what works, what doesn't, and why this approach is important.
- Make the transition now, while you still have access to synthetic products that can help with the switch.



-  Town Boundary
-  Streams
-  Golf Course
-  Pleasant Bay sub-watershed
-  Open Water
-  Limited Access Highway
-  Multi-lane Hwy, not limited access
-  Other Numbered Highway
-  Major Road, Collector



Green Lawns, Clear Waters

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