



Clean & Serene, No Gasoline!™

Sustainable Yards & Gardens



Avoiding Tons of
Pollution & Noise,
Toxins & Invasives

Dan Delventhal,
Founder, MowGreen LLC

Proud Member of:



MOW
Green[®]



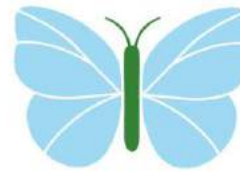
3 Steps to SustANITY

- 1. Plant Natives



- 2. Avoid Pesticides

HEALTHY



YARDS

- 3. Sustainable Lawns



Sustainable Lawns

Reducing Air & Noise Pollution

- 5-10%+ USA Problem
 - Gas gear 10-20x more polluting than cars
 - *Get the Gas off the Grass!*
 - Ave. Yard with gas = 5 mTons = 1 Car

Gas Leaf Blowers (2-stroke) are the worst

<https://www.instagram.com/tv/B-P6sDMIEZV/?igshid=f2e2i4q49aaw>

[Blower Video](#)





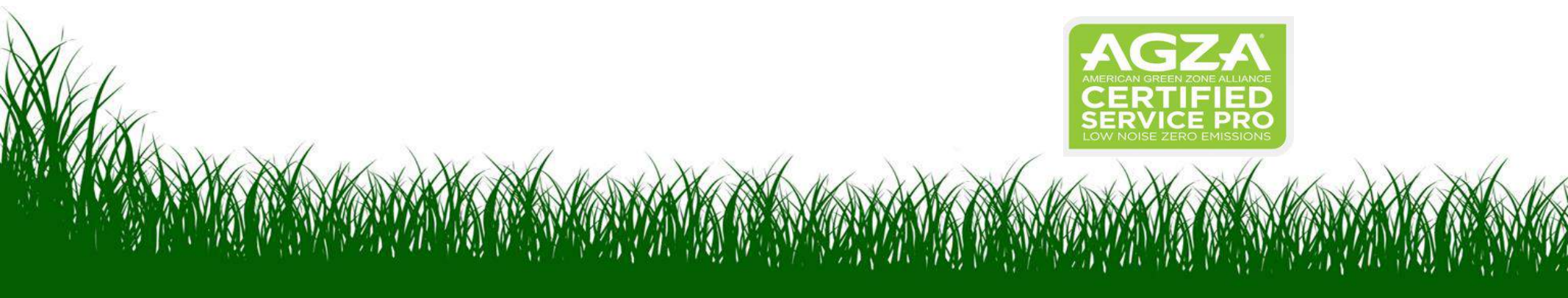
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Sustainable Lawns

MowGreen Mowing Evolution



2006, Reel mowers, 2010, Reel2Reel gang kits, 2011 Hydrogen ...



MOWGreen®

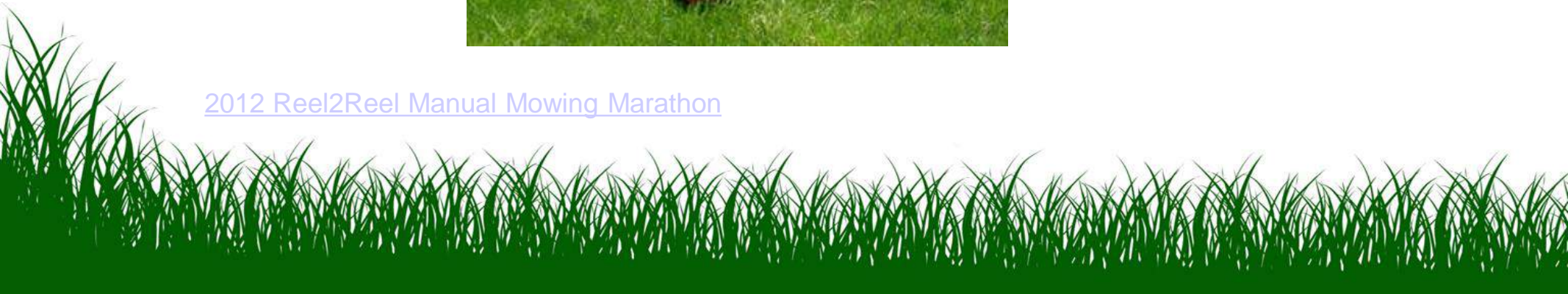
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Sustainable Lawns

Reel2Reel™ Double/Triple Push Gang Kit



[2012 Reel2Reel Manual Mowing Marathon](#)



Sustainable Lawns

The “Tesla” of Mowers (Mean Green)



2013-Small electric,
2015-Medium electric,
2017-Large electric



Sustainable Lawns

Zero Emission Lawn Care

- All battery Electric gear
- Batteries charged with Solar
- Batteries charged with 100% elected renewable
- Carbon Credits purchased for vehicle gas
- Zero Noxious Fumes!



SMOGATHON



TOWNVIBE
green awards





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Sustainable Lawns

Mission Zero Emission

Mowers, hedgers, edgers, trimmers, chainsaws, pruners, aerators, de-thatchers, sprayers, spreaders, snow blowers & leaf blowers all electric! EGO, MEANGREEN (Worx trimmers).





Clean & Serene, No Gasoline!™

Sustainable Lawns

Serene!

- MowGreen Battery Electric Gear is 50% quieter than gas-powered gear.
 - GLBs – Low Frequency & Air Whooshing Noise into Homes
 - Examples:
https://www.instagram.com/tv/CGQ_K0ags8o/?igshid=oc729fapz76n
Quiet Aerating & Dethatching
- Human powered tools also used when practical
 - <https://youtu.be/daZprKg5tHE/>



Sustainable Lawns

Air pollution avoidance!

Westchester & Fairfield Counties, NY & CT

- 150,000 + lawns
- 800,000 mTons of Carbon/GHG's
- 150,000 Cars all year
- 2 Billion Annual Auto Mile Equivalent Emissions
- \$450 Million



Sustainable Lawns

Practices - Mowing

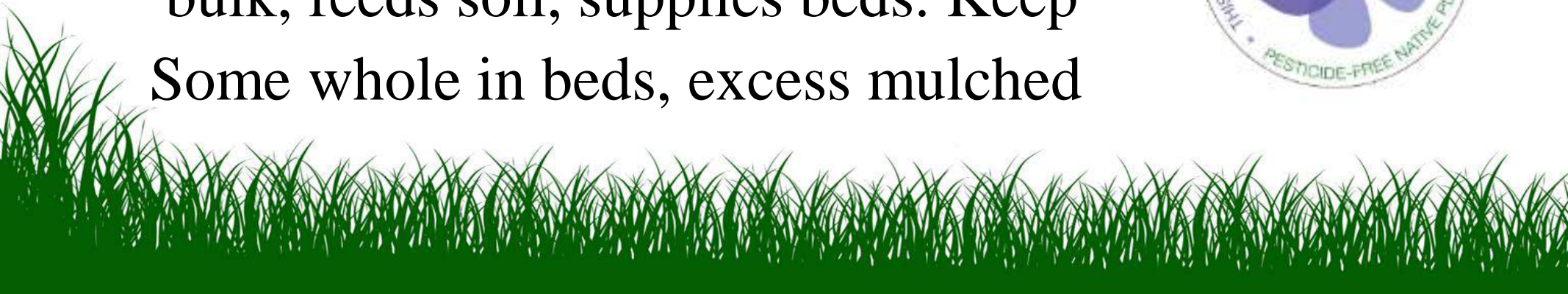
- Mowing: Height 3 to 4 inches
 - Frequency, % of plant cut ($<1/3$)
 - Avoid clumping, keep clippings
 - Trimming – no scalping
 - Timing – Dry, before rain
 - Sharpening!
 - Patterns changed: Circles are cool, critter aware
 - Stop Drop and Weed! (perennial invasive weeds: Indian Mock Strawberry, Creeping Charlie!)



Sustainable Lawns

Practices – Watering, Clean up

- Watering: 1 inch once/ Week (x2 for 85F deg.+)
- Clean up Spring sticks, mulch leaves, less heavy raking/ no core aerating. Hold off on beds.
- Mulch: May (after insects & birds done), color up existing leaves, leaf mulch, use less
- Fall: Mulch mowing leaves reduces bulk, feeds soil, supplies beds. Keep Some whole in beds, excess mulched



Avoid Pesticides

Endocrine Disruption, Carcinogens & Nerve Damage

- Synthetics are Bad: *-No Synthetics, Go Organic*
 - Fertilizers
 - Pesticides
 - Pesticides, Herbicides, Fungicides, Repellents

MowGreen is All Organic (NOFA Accredited)

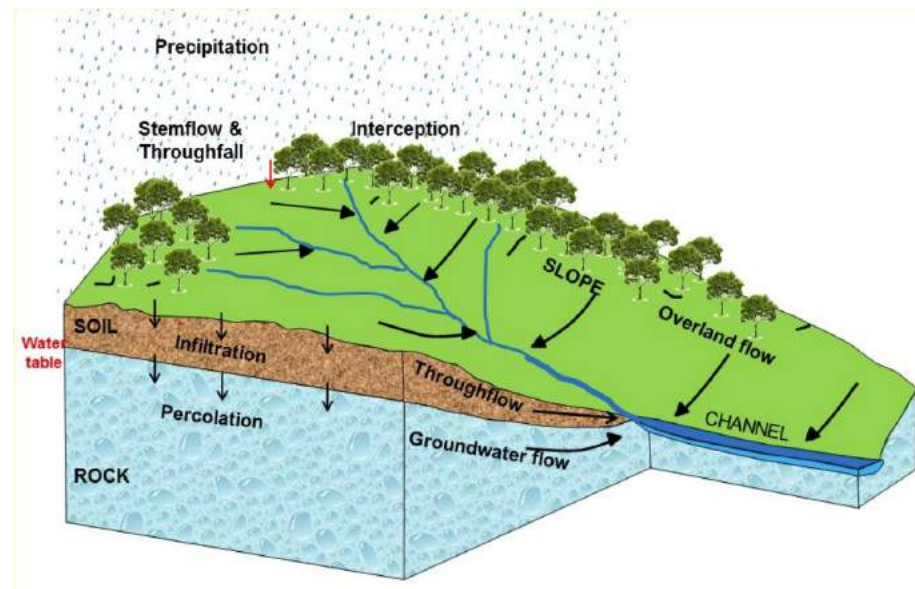
- Fertilizer, Weed killer
- PH control, Pro-biotics
- Tick, Mosquito, Grubs Treatments



Avoid Pesticides

Lawns are not ideal vegetation

- Lawns are “green pavement” for water basins
 - *Less Lawn Mowing, More Food Growing* – Lawn Reduction
- Grass is “needy”
- Synthetics run off
- Soak up
- Food sources
- Carbon Sinking



Avoid Pesticides

Organic Treatments

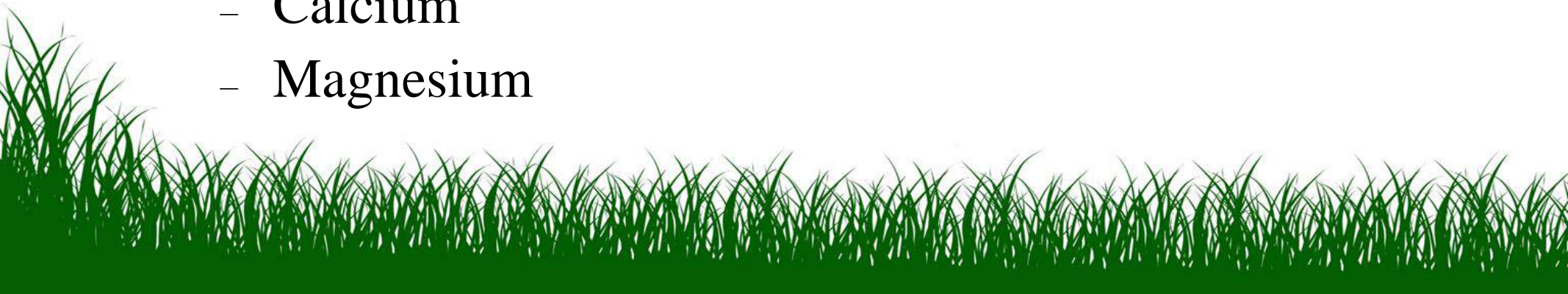
- Test Soil *Spring*
- Light clean up: Hold off on beds: Easy on raking
- Grass Seed Patching
- Feed
- Weed
- Grass OverSeed, Aerate?, Dethatch
- Weed
- Feed (Mulch Mow Leaves) *Fall*
- Deer Repellant Pottasium Ice Melt



Avoid Pesticides

Soil Test

- Soil Test Metrics
 - Organic Matter
 - PH 6.2-7 is target
 - NPK (Nitrogen *Phosporus* Pottassium)
 - Grass needs 1.5 to 4lbs (max.!) per 1000 sf per season
 - Ex: 10-0-2, 5lbs/1000 sf, = 1/2lb per app.
 - Grass clippings = 1/2lb per 1000 per season
 - Calcium
 - Magnesium



Avoid Pesticides

Soil Report

| DATE | 10/24/2017 | PAGE 1 of: 2 | TEST RESULTS |
|--------------------|----------------------|--------------|-----------------|
| LABORATORY NUMBER: | 6178 | | 6179 |
| YOUR SAMPLE | 249 Figlar F | | 249 Figlar B |
| CROP TO BE GROWN | Grass | | Grass |
| SOIL TEXTURE | Sandy Loam | | Sandy Loam |
| ORGANIC MATTER | Medium | | Medium |
| pH | 6.3 | | 6.7 |
| NITRATE NITROGEN | Low (3 ppm) | | Low (3 ppm) |
| AMMONIUM NITROGEN | Low (12 ppm) | | Low (12 ppm) |
| PHOSPHORUS | Medium High (50 ppm) | | Medium (38 ppm) |
| POTASSIUM | High (250 ppm) | | High (250 ppm) |
| CALCIUM | High (1600 ppm) | | High (1600 ppm) |
| MAGNESIUM | High (125 ppm) | | High (125 ppm) |

SUGGESTED TREATMENTS (ppm)

| | | |
|-------------------|--------------------------------|--------------------------------|
| pH ADJUSTMENT | None | None |
| FERTILIZER GRADE | 32-0-4*, Now 32-0-4*, April | 32-0-4*, Now 32-0-4*, April |
| FERTILIZER AMOUNT | 3 lbs, Now 3 lbs, April | 3 lbs, Now 3 lbs, April |

Remarks:

ppm (parts per million) values are approximate.

*Other lawn fertilizers may be substituted. Choose a similar grade with at least

EXPLANATION OF RESULTS

Soil tests serve as a guide to intelligent and environmentally sensitive use of fertilizers and other soil amendments. Information from soil tests cannot correct plant problems caused by insects or disease or site limitations such as not enough sunlight.

SOIL TEXTURE: Texture describes the amount of sand, silt and clay in the soil. It influences the amount of water and nutrients a soil can hold. *Sands, loamy sands and sandy loams* require more frequent watering and lose nutrients more readily by leaching than do *fine sandy loams and loams*. *Silt loams, silty clay loams and clay loams* often retain excessive moisture and reduce air movement to plant roots.

ORGANIC MATTER: Organic matter also influences the amount of water and nutrients held by the soil. *High* organic soils have better structure and retain nutrients and water better than *Medium* and *Low* organic soils. Soil organic matter may be improved by the addition of materials such as compost. A yearly addition of organic matter to gardens promotes soil improvement.

pH: Soil pH affects the availability of nutrients and, when interpreted with texture and organic matter, indicates the limestone needs of the soil. The results are expressed in pH units, with pH 7.0 being neutral. Connecticut soils are generally somewhat acidic in the pH range of 4.5 to 6.5. Most plants except for rhododendrons, azaleas, mountain laurel and blueberries grow best at a soil pH between 6.0 and 7.0.

NUTRIENT TESTS

The Morgan Test provides an estimate of nutrient availability to plants. Results are given in relative terms such as *Low*, *Medium*, and *High*. *Excessive* is used when nutrient concentrations may damage plants. Generally, plant nutrients should be high during periods of rapid plant growth.

NITRATE NITROGEN: Plants generally take up nitrogen in the form of nitrate ($\text{NO}_3\text{-N}$), either from applied fertilizers or microbial conversion of other forms of organic nitrogen in the soil. The Morgan Test indicates how much nitrogen is immediately available to plants, but not the ability of the soil to provide nitrogen throughout the growing season. Excess nitrate nitrogen can be harmful to plants and may leach to ground water.

AMMONIUM NITROGEN: Soils generally do not contain high concentrations of ammonium unless they have been recently fertilized, over fertilized or received fresh manure. High ammonium levels are sometimes harmful to plants.

PHOSPHORUS: Optimal levels of phosphorus favor strong seedlings, abundant fruit and colorful flowers. Phosphorus can be over applied resulting in micronutrient deficiencies.

POTASSIUM: Plant hardiness is improved with proper amounts potassium. Over application of potassium can result in excessive soil salinity.

CALCIUM: Calcium levels in conjunction with the pH test, will determine the need for limestone or gypsum.

MAGNESIUM: This test identifies soils where magnesium treatments such as dolomitic limestone or Epsom salts may be beneficial.

SALTS: Measurements of soluble salts are sometimes reported on our tests where over-fertilization or other sources of salt may have injured plants.

CORRECTING DEFICIENCIES OR EXCESSES

The soil test suggests additions of fertilizers and other amendments based on site and crop specific needs.

pH ADJUSTMENT: Limestone suggestions are based on the use of dolomitic limestone. Rates of pelletized limestone are the same as pulverized limestone. Hydrated lime may be used if the rate is reduced to three-fourths of that for limestone. Aluminum sulfate or sulfur is suggested when soil acidification is needed.

FERTILIZER: The principal plant nutrients in mixed fertilizers are nitrogen (N), phosphorus (P) and potassium (K). Although they may be present in various forms, the formula is always expressed as percent of N, P (as P_2O_5) and K (as K_2O) in that order. Thus a 5-10-5 fertilizer would contain 5 lbs. of N, 10 lbs. of P_2O_5 and 5 lbs. of K_2O per 100 lbs. Fertilizers other than those suggested on the report may be used if the amounts of nutrients applied are similar.

Organic fertilizers are usually slower acting and lower in nutrients. They are often recycled waste products. Multiple materials such as cottonseed meal and bone meal are often needed. Recently, commercially prepared organic fertilizers containing various ratios of N, P and K have become available. These fertilizers can be substituted if the amount of nutrients applied is similar. Fresh manure may damage some plants and should be worked into the soil well in advance of planting.

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WWW.CT.GOV/CAES
WWW.CT.GOV/CAES/SOILTESTING

6/24/16



Clean & Serene, No Gasoline!™

Avoid Pesticides

Track PH

| | | | |
|-----------------------|-------------------------------------|-------------------------------|---|
| Left Side Grass Type | Select an Option | Right Side S. F. | |
| Right Side Grass Type | Select an Option | Back Yard S. F. | 1500 |
| Back Yard Grass Type | SunNshade | Leaves Processing Preferences | gather and bag (tarp and remove) all leaves |
| Grass Length | 3.75 | Date last Soil Sample | 06-10-2020 |
| Irrigation System | <input type="checkbox"/> | Timing Restrictions | Flexible |
| Calendar Invites? | <input checked="" type="checkbox"/> | Charging | Back |
| Plants | | pH Front | 5.9 |
| CGM? | Yes | pH Side Right | |
| pH Back | 6.3 | pH Side Left | |



MOWGreen®

Clean & Serene, No Gasoline!™



MOWGreen®

Organic Lawn Care Program



Builds soil health and aesthetics with beneficial probiotics (Quantum Growth) and an organic nutrient program that feeds the plants, trees and turf as well as sustains beneficial organism growth (prebiotics). Special thanks to Green Earth Ag & Turf and CT NOFA for guidance.

| MowGreen Turf Treatment Plan begins with a Soil Analysis | | | | |
|--|---|---|-----------------------------------|--|
| | Fertilization & Soil Health | Weed Control | Insect Control | Amendments |
| March/April | Nitrogen Fertilizer (1/2 rate)* or 10-0-2 Gluten mid to late April and May | Pre-Emergent (gluten)*** | Tick Killz, grubGONE! (if needed) | Seed patching/Overseeding (if needed)**** |
| May | Turf Formula + Quantum (full rate) + Vitazyme | Weed Killer as Needed** | Tick Killz | Overseeding (if needed) Lime/Sulfur & Micronutrients As Necessary |
| June | Late June or Early July: Turf Formula + Quantum Growth (1/2 rate) | Pre-Emergent (gluten), Weed Killer as Needed** | Tick Killz (if needed) | |
| July | | Weed Killer as Needed** | Tick Killz (if needed) | Seaweed or Turf Form. (if needed) |
| August | Late August for Corn Gluten (listed below) | | Tick Killz, grubGONE! (if needed) | Seaweed or Turf Form. (if needed) |
| September | Nitrogen Fertilizer (1/4 rate)* or 10-0-2 Gluten Turf Formula + Quantum (1/2 rate) + Vitazyme | Pre-Emergent (gluten)***, Weed Killer as Needed** | Tick Killz, grubGONE!(if needed) | Aeration & Overseeding (if needed) |
| October | | Weed Killer as Needed** | Tick Killz | Aeration & Overseeding (if needed) Lime/Sulfur & Micronutrients As Necessary |
| November | | | Tick Killz (if needed) | |

We believe some plant diversity in lawns like clover and dandelions is healthy. Weed and insect control can be minimal depending on your tastes. We also encourage having native plants to support the pollinators and birds.

- Quantum Growth at a rate of 2 gallons / acre (6 ounces / 1,000 sq. ft.) total / year and Turf Formula at a rate of 4 gallons / year.
- Vitazyme application rate is 2 teaspoons (1/2 tablespoon) per 1,000 square feet (1 gallon covers 10 acres)
- Soil tests are always recommended to maximize the efficiency of nutrient applications.

- * N fertilizer at 1/2 to 1/4 the recommended rate with Quantum Growth and Turf Formula.
- ** For selective weed killers (turf), Fiesta is the best option we have tested. For non-selective (beds, walks, driveway cracks and gravel), 20% vinegar often suffices
- *** Pre-emergent weed control is met by corn gluten meal which also doubles as fertilizer, delivering N (nitrogen) and K (potassium).
- **** Regular grass seed patching throughout the season is also recommended for bare spots to avoid giving weeds a jump on things.

Mow at 3" or above for best organic weed control.

Leaving grass clippings on the lawn provides 15% of required nitrogen and mulch mowing leaves on lawns reduces bulk and feeds the soil further. Leaves make great mulch for beds too.

Water 1" /week (unless temperature is above 85F, then 2") *if no rain*. Water deeply and seldom (1x/week) for optimal root growth *if no rain*.

We also have organic solutions for pest, animal, and disease control, arbor and plant care, worm castings, and environmentally safe ice melters, etc..





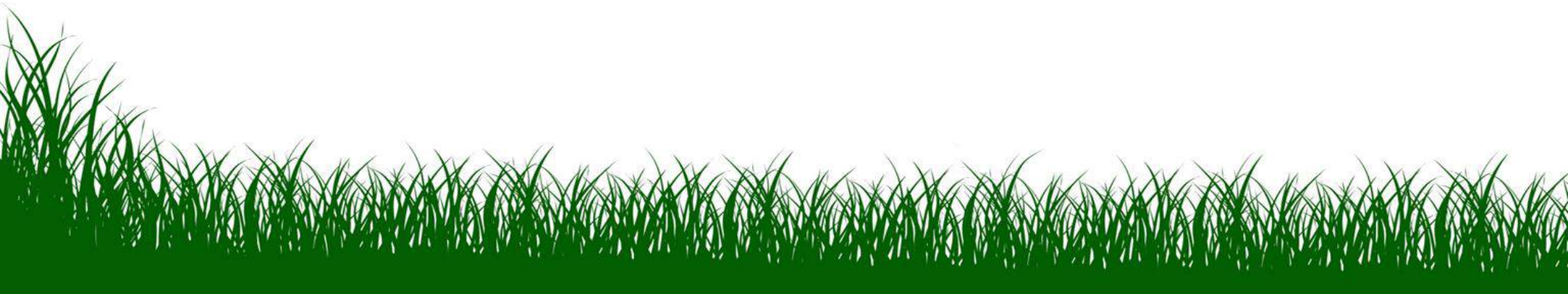
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Avoid Pesticides

Organic Treatments

Green Earth Ag & Turf Full Organic Treatment Plan for Turf Professionals

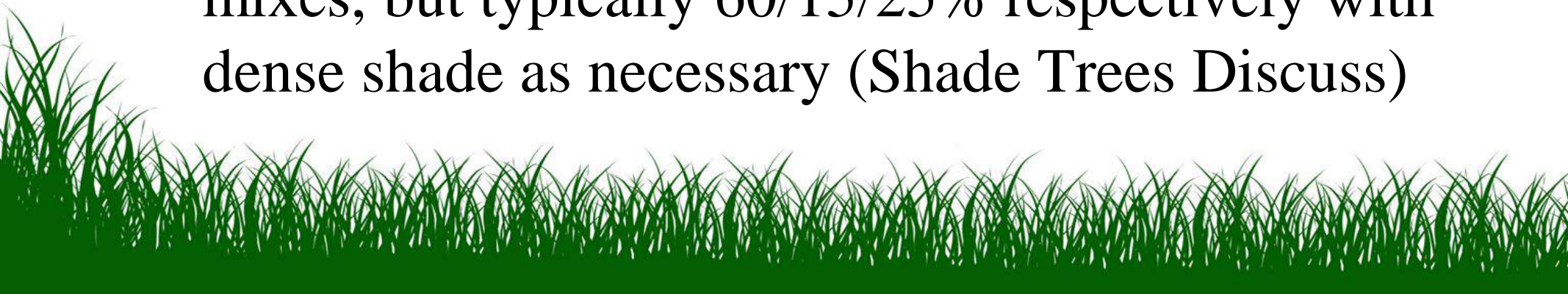
| TIMING | |
|--------------------------|---|
| April / Early Spring | Quantum Growth + Neptune's Harvest Turf Formula |
| May / Late Spring | 10-0-2 Gluten Pre-Emergent / Fert (When Soil Temps reach 57°F) |
| July / Summer | Quantum Growth + Neptune's Harvest Turf Formula (1/2 rate) |
| Late July / Early August | grubGONE! |
| September | Organic Approach 9-0-4 (1/4 - 1/2 rate) Quantum Growth + Neptune's Harvest Turf Formula (1/2 rate) |



Avoid Pesticides

Organic Treatments

- Weed & Feed: Corn Gluten Meal 10-0-2
- Probiotics: Quantum Growth, Compost, WormX
- Weed Control: Finalsan, Fiesta
- Tickkillz, MosquitoBarrier, GrubGone, Bobbex
- Grass Seed: Tall Fescue, Kentucky Bluegrass, Perennial Rye, & Dense Shade Mix. Tailored mixes, but typically 60/15/25% respectively with dense shade as necessary (Shade Trees Discuss)



Plant Natives

No Invasives

- Green Corridor, Pollinator Pathway, Half Earth Movement

- *No Invasives! Let's Plant Natives!*

- Importance of natives for food web, bio-diversity

- Invasives/Natives-aware staff

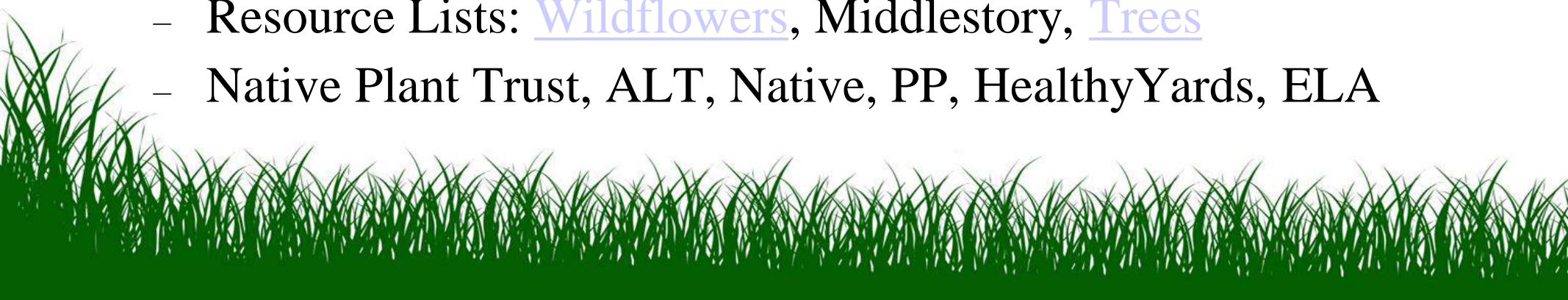
- Crab grass, stilt grass, creeping charlie, indian mock strawberry, garlic mustard, Japanese barberry, burning bush, bitter dock, burdock,
 - bull thistle, phragmites, etc.



Plant Natives

Lawn Reduction/Habitat Restoration

- Fewer inputs, more critter food, habitat
 - Meadow areas
 - Bigger beds
 - Turf alternatives (Clover? Micro, White, Red)
 - Gardens
 - Composting
 - Shade Tree areas ([Sedges! Pennsylvania, Appalacian, Bristle Leaf](#))
 - Resource Lists: [Wildflowers](#), Middlestory, [Trees](#)
 - Native Plant Trust, ALT, Native, PP, HealthyYards, ELA



Plant Natives

Survey, Record, Design, Plan, Cull, Plant!

Habitat Restoration Services Home Site Survey



No Invasives. Let's Grow Natives!™



Survey:

1. Tree health (canopy, leaves, bark, roots)
2. Understory health (diseases, pests)
3. Shrubs and bushes
4. Flower plantings
5. Turf, ground cover
6. Soil
7. Microclimates (habitats)
8. Invasive plants inventory
9. Inventory of bird feeding plants/trees
10. Inventory of pollinator food plants
11. Lawn reduction prospects



Report:

1. Site survey results
2. Options for habitat regeneration
3. Plans for invasive plant mitigation
4. Plans for addressing any problematic issues found during survey
5. Planting options for birds
6. Planting options for pollinators
7. Planting options for flowers blooming through the season





Clean & Serene, No Gasoline!™

Service Area, Westchester & Fairfield
Counties, & New Haven Area



Team

Dan Delventhal

MBA, AOLCP, Founder

Ed Bruderman

Director

Chris Servilla

Manager

Angie Doroszkiewicz

vOffice Manager

Bill McKinney

Dual Licensed Arborist, CT, NRCS Certified Conservation Planner





Clean & Serene, No Gasoline!™

Allies - Cool Customers, Advisors, Partners, Vendors

Analiese Paik, Sustainne

Aspetuck Land Trust, Green Corridor Landscape Partner Program

CT NOFA & Ecological Landscape Alliance

Dan Mabe, CEO, AGZA (American Green Zone Alliance)

Jamie Banks, PHD, MS, CEO, Quiet Communities, Inc.

Daphne Dixon, E.D. LiveGreen CT

Mel LeMay, David Brant

Michele Sorensen, Master Gardener

Liz Garrett, Rye Healthy Yards

Fiona Mitchell, Philippine de Haan Healthy Yds

Discovery Museum, Earthplace Nature Center

Green Village Initiative, Community Gardens

Pollinator Pathways, Deepika Saksena

Stephanie Weiner, New England Smart Energy





Clean & Serene, No Gasoline!™

Tending the ave. lawn with gas emits tons of green house gases per year; like a car driving 12,000 miles, as gas lawn gear is 20 times more polluting per gallon than in a car. Lawn Care is over 5% of US air pollution. MowGreen cuts grass without gas. Over 600 metric tons of air pollution are avoided annually - over 6,000 acres mowed without gas, avoiding 7 MILLION auto-mile equivalent emissions since 2006. MowGreen® is a carbon neutral company, focused on sustainable lawn care technologies and services.

***Values:** Reduction, Ecology, Ethics, Life sustaining, & Respect, Effectiveness, Efficiency, Lasting value (REEL).*

***Missions:** Get the Gas off the Grass! More Food Growing, Less Lawn Mowing! No Invasives, Let's Plant Natives! No synthetics, Go Organic!*

***Vision:** National Network of locally managed and centrally supported eco-friendly gardening & lawn care.*





Contact

- <https://MowGreen.com>
- <https://mowgreen.com/mowgreen-blog/>
- **Dan@MowGreen.com, 203-254-9999**

Impossible Dream?

To Dream, The Impossible Dream,
To Hope, that our Air can be Clean,
To Mow, with No Carbon Emissions,
To Drink, from a Clear Mountain Stream,

This is my Quest, and I'm Healthy and Strong,
Its from pushing Reel mowers, on Organic Lawns,
So I'm thinking its Cool, to Burn Fat but Not Fuel,
Let's Stand up for what's Right, like we're Teaching in School.....

MowGreen's Reel Mowing, and solar charged electric's,
Clean & Serene,
So, go green with MowGreen,
...we use no stinking gasoline!