

Alternative Lawns:
Using clover as an eco-sustainable alternative to grass



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Summary:

Traditional grass lawns are costly, time-consuming, and not a sustainable, environmentally friendly option. Planting a White Dutch Clover (*Trifolium repens*) lawn as opposed to a traditional Kentucky Bluegrass (*Poa pratensis*) lawn reduces the fiscal and physical investment of lawn maintenance and promotes more sustainable practices, all while maintaining the green lawn appeal. This project investigates this lawn alternative, among others, and considers the advantages and disadvantages when compared to a traditional grass lawn. We have compiled our findings as a proposal to benefit Rutgers University and homeowners alike. We have created plans to implement clover lawns on both the engineering quad on Busch Campus and at Rutgers Gardens, which will make on-campus lawn maintenance more efficient while also educating the public about this alternative. Additionally, the project includes a start-up guide to planting a clover lawn to educate any interested individual who would like to grow such a lawn.

Section 1: The Traditional Grass Lawn

Grass lawns are a ubiquitous component of suburban society, often considered the “connective tissue” of neighborhoods. A well-maintained lawn acts as a symbol of status, with good lawns associated with good citizenship. Lawns also provide an open, natural space for children to play, dogs to run, and frisbees to be thrown. As one of the more “out there” ideas, it has been theorized that as a species, humans developed a penchant for open grassy landscapes that resemble the short-grass African savanna that were the setting of our early evolutionary history. A great lawn is an essential part of the American lifestyle, but it’s a hassle.

In most areas, it’s completely unnatural for a grass to stay green year-round. The maintenance of such a lawn is a constant struggle with the environment. To survive, grass lawns require a significant investment of time, effort, and money. They must be watered and mowed regularly and require potentially harmful pesticides, herbicides, and fertilizers. In the United States, there are about 50,000 square miles of grass lawns - about three times as much as there are of corn - making grass the largest nationally irrigated crop per surface area (Lindsey 2005).

Water Needs

Water is perhaps the most important natural resource on Earth. Considering that less than 1% of the water that covers the Earth’s surface is available for human use, it is extremely important that this resource be efficiently managed and not wasted. Water scarcity is a significant problem facing the world today, with decreasing freshwater supplies and consumption rates that are increasing at twice the rate of the global population (“Water Scarcity”). Even in the United States, rivers and streams go dry as water is removed for irrigation, and the water table has dropped by hundreds of feet in many areas along the West Coast and The Great Plains (Lindsey 2005). It is superfluous to use copious amounts of such a precious resource on something as superficial as a lawn. According to the U.S. Geological survey, 7.8 billion gallons of U.S. water goes towards outdoor use, with the majority of it used in landscaping. This amounts to 30% of all water consumed in this country. In western states, where water is even scarcer, up to 70% of water use is estimated to be devoted towards landscaping. In a year, a single typical suburban lawn will consume 10,000 gallons of supplemental feed from a hose (Vickers 2001). To make matters worse, most homeowners tend to water in excess, exacerbating the already high water demands of the lawn. Installation of efficient irrigation and watering

systems could mitigate this problem, but at a substantial monetary cost. The traditional home grass lawn is an obvious glutton in terms of water consumption.

Fertilizers

The application of pesticides and fertilizers, required by traditional lawn care techniques, is also an issue. Citizens of the United States apply almost eighty million pounds of pesticides and ninety million pounds of fertilizer to lawns and gardens annually. Suburban lawns and gardens receive 3.2-9.8 pounds of pesticide per acre, which is significantly greater than the agricultural average of 2.7 pounds of pesticide per acre (Pimental *et. al* 1991). These pesticides and fertilizers contaminate the soil and air while causing runoff that can leach into bodies of water and contaminate the drinking water supply. Nitrogen and phosphorus contained in these chemicals can also lead to eutrophication events, such as algae blooms, that have the potential to destroy entire ecosystems. The Gulf of Mexico experiences a yearly dying event where countless aquatic organisms die due to a flux of nitrogen that travels down the Mississippi and into the gulf. The use of these supplemental chemicals influences our larger ecosystems in a pronounced way.

Maintenance

The motorized equipment used for lawn care exudes emission of toxic exhaust and greenhouse gases and often relies on fossil fuels for energy. In a single hour, a gasoline-powered lawn mower emits as much pollutants as eleven new cars would in the same time frame. These emissions include volatile organic compounds and nitrogen oxides, both of which are serious threats to the natural environment ("Green Landscaping"). With a U.S. estimated 3 billion hours a year use of gasoline-powered lawn and garden equipment, there is a significant amount of toxic pollutants produced. Lawn mowing produces solid wastes as well. Grass clippings that are not composted end up in landfills and composted grass clippings that are contaminated with pesticides can be even more harmful to the environment (Lerner 2002). Mowing can eliminate plant habitat diversity and limit floral resources, both of which are important for insect populations. Additionally, lawn mowers have a direct effect on insect mortality as slow moving adults and juveniles may not be able to escape the rotating blades (Black *et al.* 2011). Mowing the lawn isn't just a chore; it's a serious risk to the environment.

The maintenance of traditional lawns requires a significant investment of personal time, money, and effort. The average lawn owner in the United States spends between \$400 and \$700 a year on maintenance alone. As a whole, citizens spend around \$30 billion annually on lawn care, with the average individual spending forty hours a year maintaining their lawn.

Conclusion

The idealized image of a perfectly manicured lawn becomes tainted when the determinants involved in its care and maintenance are considered. The superfluous use of water, heavy application of toxic chemicals, emission of pollutants, destruction of habitat, and investment of personal time and effort are a high price to pay for a patch of grass. There are more sustainable lawn alternatives available, ranging from groundcover and ornamental plants to inorganic and synthetic options. Each lawn type, whether grass or an alternative, has their own advantages and drawbacks. Despite their differences, some may offer a preferred lawn experience that a property owner may not have previously considered.

Section 2: Clover as an Alternative

Low growing clover provides a similar lawn aesthetic, yet offers unique advantages over traditional grasses. Clover does not require herbicides to kill weeds because it outcompetes typical lawn weeds. Clover is nitrogen fixing; meaning it creates its own fertilizer which not only benefits itself but surrounding plants as well. Additionally, soil compaction, which leads to excess run-off and erosion, especially in the clay soils common to New Jersey, is reduced by the deep root system of clover. Compaction is a natural process in which drought and animal feet can compress layers of soil. Unlike most other soils, clay doesn't bounce back after it's compacted, making it more dense and difficult for plants and animals to penetrate. Clover also attracts bees, which is especially important when considering the recent decline in bee populations. Bees are reportedly responsible for pollinating 30% of the world's crops; the support of this species and rebuilding of bee populations is critical. Overall, clover lawns are an easy and effective way to promote agricultural sustainability.

Clover is often treated as weed, but it's a practical choice for lawns. Clover's surface is soft and comfortable to walk on and is recommend for low-to-mid traffic areas. On paper, it provides the same traffic rating as the common Kentucky Bluegrass (*Poa pratensis*), however

clovers tend to be slightly more delicate than grass. Depending on the area, clover may also need to be reseeded every two to three years in order to maintain uniformity. Both of these issues can be resolved by mixing different species of clover together or mixing clover with traditional grasses. That being said, a variety of species is key to increasing the resilience of any plant, not just clover. Clover is best seeded in the early spring with sawdust or dirt added to the seed for a more even seeding.

Other Alternatives

Other lawn alternatives are also available. Inorganic cover, such as pebbles and stones, offer a clean and uniform look, but can be expensive to lay out and expensive to pick up if renovations need to be made. Synthetic grass offers a mock lawn experience, but is expensive to maintain and, as with inorganic cover, is expensive to lay down and rip up. Moss has the lowest maintenance of the options stated thus far, but its shallow root system can cause it to shift if walked on during wet weather. Despite their flaws, these options might be more suited for certain environments and specific needs.

Alsike Clover

Alsike Clover (*Trifolium hybridum*) is a more durable hybrid of the common red and white species of clover. It can grow up to two feet high and its flowers range from red to white, but are generally pink. Although it is technically a perennial plant, its short life span often causes it to be treated as a biennial (Veterinary Medicine Library 2013). This particular species is more suited for wet, poorly drained areas (St. John 2008). Though considered a minor pollen species, alsike clover is considered to be one of America's best honey plants, allowing bees to produce up to 500 pounds of honey from one acre. Alsike produces similar yields and quality of honey as white dutch, but it is less far reaching nationally (Pellett 1920). This clover grows quite tall and when blended with other clovers, lawns can be more resilient against pedestrian or animal traffic.

White Dutch Clover

White Dutch Clover (*Trifolium repens*) is a perennial white clover that matures at about four to eight inches in height. It is the most popular species of clover for alternative lawns and mixed lawns alike. Its root system is longer than most grasses and grows best in moist, fertile

soils. One pound of seed will cover a 1000 square foot lawn, while four pounds per acre is recommended for beekeeping. It has a potential nitrogen production of 60 pounds per acre per year. This clover is best seeded in early spring or late summer and no soil tilling is required. White dutch typically blooms mid March and tends to grow slower during the summer months. Bee colonies love white dutch and rarely produce less than 200 pounds of honey per colony (Pellett 1920). White Dutch Clover is widely available, requires low maintenance, looks great, and is a great lawn alternative.

Conclusion

There are currently 245 recognized species of clover, members of the genus *Trifolium*. Out of these varieties, alsike and white dutch are two of the most popular clovers when seeding alternative lawns and are often mixed together. For our purposes however, White Dutch Clover (*Trifolium repens*) presents the best option for an alternative lawn. Alsike is a great option that can be used to sustain honey production, but it's too tall and its lifespan is too short for our needs. Its short stature and resilience makes white dutch the most practical clover for the traversable, open space areas that our service projects require.

Section 3: Clover on Busch Campus

Current Lawn

The lawns at Rutgers University currently use a grass blend made up of primarily Kentucky Bluegrass (*Poa pratensis*). This is one of the most common grasses in the world and for good reason. It is highly resistant to heat, cold, drought, pests, disease, and is moderately priced at \$23 per pound, with one to two pounds needed to overseed 1000 sq ft of turf. Bluegrass requires more water and fertilizer than other cool grasses and is best planted in low-to-mid traffic areas. Seeded in spring, bluegrass is one of the longest living perennial grasses, but it can become thin and be outcompeted by weeds if not manicured (Wennerber 2004). Kentucky Bluegrass is a great choice as far as grasses go, but clover offers more benefits for the university.

Location

The Engineering Quad is the best place on campus to seed White Dutch Clover. The location, identified as red in Figure 1, receives a lot of traffic, but it is largely confined to the sidewalks. Due to the numerous concrete paths and cut-throughs, there is no need to seed around student-made paths, like those often found on Cook Campus. The plot currently has no construction in progress and is approximately 1000 feet in width and 500 feet in length, when measured by its corners. Based on calculations by Google Earth, the marked area is 327,937.75 sq ft, or 7.53 acres. The area's limited disturbance and high traffic makes the Engineering Quad an optimal place to plant White Dutch Clover, while also exposing passersby to its aesthetics.

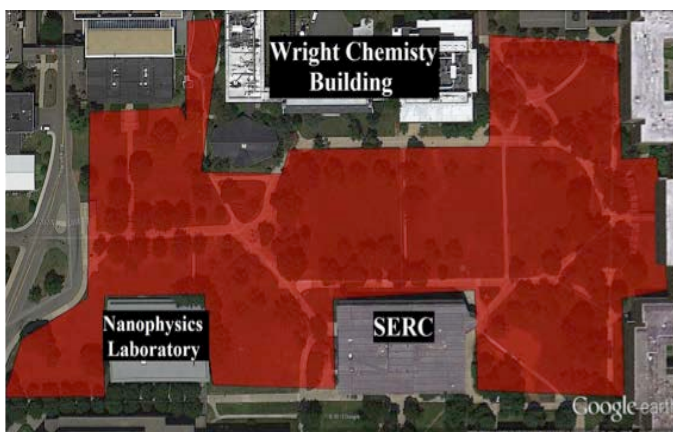


Figure 1: Top down view of the Engineering Quad area. Red represents the proposed area to overseed with White Dutch Clover.

Timeline of Implementation

Clover is best seeded in the early spring when temperature lows are at 40 degrees. Before seeding can take place however, the grass lawn must first be cut at the shortest possible mower setting. This step reduces competition, allowing the seedlings to thrive. The mow should be followed by a dethatcher to reduce the thatch and allow more opportunities for the seed to reach the soil. Only now is the White Dutch Clover seed ready to be spread. Clover seeds are smaller than grass seeds, so a little goes a long way. To reduce waste and provide a more even coating, mix 1 part seed with 10 parts soil when using a broadcast spreader. The spreader will bury the seed in the necessary $\frac{1}{4}$ in of soil, so no additional topsoil is necessary. After seeding, the soil needs to be watered regularly for 7 to 10 days to maximize seed production. Once germination is complete, watering can cease. The lawn should not be cut until the initial sprouts reach a minimum height of 4 inches.

As far as maintenance goes, there are some important points worth noting. Over time, the clover will outcompete the grass. This is completely normal as germination of Kentucky Bluegrass occurs 3 times slower than White Dutch Clover. When combined with clover's

horizontal growth, it will eventually push out grass as the dominant lawn cover. As the density of clover increases, mows should become less frequent. Assuming the grass lawn is mowed once a week, mows can be reduced to every other week due to the reduced grass population. If weeds become an issue, most broadleaf herbicides will kill clover in addition to the weed, so herbicides should be avoided. Clover can be cut shorter than grass, but, as with grass, shorter cuts will reduce its natural reseeding process. If buds are cut before they bloom, yearly over-seeding may be necessary. 4 inches is the recommended lawn height and clippings should not be bagged.

By simply seeding a clover lawn, Rutgers can expect to save \$146,250 for the seeding year. A comprehensive list of resource comparisons between grass and clover at the quad is shown in Table 1 (Appendix). An in depth cost comparison between grass and clover in the Engineering Quad is shown in Table 2 (Appendix).

Reducing bee attraction

Clover's tendency to attract bees has clear agricultural and ecological advantages, but it may not be desirable for a major campus. The health and safety of people with allergies and younger children is the primary concern, but bees can also be viewed as pests. Regardless of the reasoning, regular summer mows at 1.5 to 2 inches prevents clover buds from flowering and reduces bee density. It is highly recommended that flower buds be left to bloom in more isolated areas where the presence of bees are not be an issue. Bee populations desperately need the nectar that clover patches can provide.

Section 4: Clover at Rutgers Gardens

Rutgers Gardens would benefit from a clover field because clover is one of the preferred flowers of honey bees. During the warmer months, their flowers produce significant amounts of nectar that attract these bees. Bees attracted to clover gardens also benefit nearby plants that rely on animal driven pollination. According to Goulson *et al.*, plants within 1 km of clover gardens are significantly more likely to be visited by bees than those without.

The natural surroundings of Rutgers Gardens provide an optimal habitat for bees. Windbreaks, caused by dense tree cover, provide less turbulent wind, allowing bees to fly and traverse more efficiently. The gardens also provide the variety of flower shapes and sizes and overlapping bloom times needed to maintain bee populations (Vaughan and Black 2006). The

variety of flowering plants and the density of trees and shrubs at Rutgers Gardens would provide bees with a comfortable habitat to survive year round.

Decline of Bee Populations

It is still unclear as to the exact cause of the recent decline in bee populations. Colony Collapse Disorder (CCD) is a mysterious condition in which worker bees abandon the hive, leaving their queen, and those remaining in the hive, to perish. This condition was first noted in Europe, with current research suggesting that it was introduced to the North American species as a result of globalization. CCD, compounded alongside other factors such as habitat loss, parasites, and pesticide use, has lead to serious economic and ecological consequences (Sperling 2009). The primary bees affected are honeybees, which are important for pollination in natural systems as well as of agricultural crops. One third of all human crops rely on honeybees for agriculture, with some crops relying entirely on these bees for reproduction (“Pollinator”). The fostering of bee-friendly habitats is critical to better support this precarious, pollinating population.

Timeline of Implementation

Currently we are working together with Rutgers Gardens to create a clover plan. Until the final location is realized, we’ve constructed a per acre resource and cost calculator to quickly generate an estimate as to the predicted gains by seeding White Dutch Clover. From those calculations, assuming honey yields are harvested from the local bees, an acre of White Dutch Clover can save Rutgers Gardens a total of \$6766 a year. A comprehensive list of per acre resource comparisons between grass and clover is shown in Table 3 (Appendix). An in depth cost comparison between grass and clover per acre is shown in Table 4 (Appendix). These per acreage tables can prove incredibly beneficial when applying clover to new locations as well.

Section 5: Clover at Home

For the home, we recommend over-seeding clover onto an existing lawn. This will result in a lawn that is a hearty mixture of clover and grass. To have a pure clover lawn, all of the existing grass would need to be torn up and this is outside the scope of most homeowners. The addition of the short growing, self-fertilizing, low maintenance, long living white dutch species

will provide many of benefits of a pure clover lawn, with the durability of a grass lawn. This clover is best seeded from early spring to late summer, when the ground is thawed, and no soil tilling is required. White dutch typically blooms mid March and tends to grow slower during the summer months.

See page 10, under Supplemental Materials, for an informative brochure designed with homeowners in mind.

Current Implementation of a Clover Lawn

At the moment, we are working with Professor Fagan to plant clover on her personal lawn in Bucks County, Pennsylvania. We intend to plant clover on a grassy plot during the spring months to document and publicize how it grows. We also intend to compare the cost of maintenance between grass and clover to demonstrate how they compare. Having a genuine clover lawn testimonial, backed up by cost, resource, and personal experience comparisons, is just another effort to raise public awareness of alternative lawns.

Conclusion

When compared to grass, clover is an easy, cost reducing way to enjoy your lawn. It leaves more money in your pocket, is less of hassle to maintain, and as nice side benefit, is a more sustainable, resource prioritizing practice. When we think of sustainability, we tend to think in terms of large complex objects and technology. Businesses and homeowners are offered incentives to install expensive solar panels on their property and automobile manufactures offer more hybrid and electric alternatives, for a price. These are steps in the right direction, but truly effective environment changers are going to occur when applied to deceptively smaller issues. Much like re-engineered water bottles and cloth grocery bags, alternative lawns represent a small change that can provide substantial gains. By providing an effective strategy for homeowners, nature lovers, and businesses, we intend to show that clover lawns are a smarter alternative than grass.

Supplemental Material: Introductory brochure for homeowners

Growing a Clover Lawn

LAWN PREPARATION & PLANTING

3. **Plant between early spring and late summer.**
As long as the soil has thawed, you're ready to get started.

4. **Cut grass to shortest mower setting.**
Less grass affords a greater opportunity for seeds to germinate after being planted.

5. **Rake the grass to thin it.**
For this, we recommend you use a thatch rake, but a regular old leaf rake will work as well. For larger areas, power dethatchers are also available. Raking also helps reduce the thatch.

Thatch: a thick layer of living and dead material made of primarily the roots and stems of grass that impedes growth of new seeds.

1. **Spread the seed.**

For small areas, it can be spread by hand, but larger areas should be seeded using a broadcast spreader, which allows for a more even distribution of seed.

Tip for using a broadcast spreader:

1 part seed should be mixed with 10 parts sand, sawdust or compost. Clover seeds are smaller than grass seeds, so the filler ensures that the seed is spread out evenly across the lawn.

2. **Water daily for 7-10 days.**

After the seeds are spread, the soil needs to stay moist for optimal germination. To maximize seed production, make sure the seeds are watered daily until the clover has sprouted.

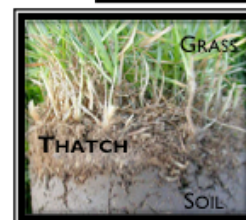


THATCH RAKE

Over-seeding cover onto an existing lawn will result in a lawn that is a hearty mixture of clover and grass.



BROADCAST SPREADER



Estimated Time Required

Mowing	1 hour/acre
Raking	2.5 hours/acre
Seeding	1 hour/acre

Other Materials

Lawn Mower
Dutch white clover seed
Hose or sprinkler



White Dutch Clover

YOUR GUIDE TO A NATURAL & LOW-MAINTENANCE LAWN



QUESTIONS? CONTACT:

Kelsey Noll: kelseynoll@gmail.com
Steven Daniels: daniels1391@gmail.com



Benefits OF A CLOVER LAWN



- **Outcompetes weeds:** no pesticides required
- **Nitrogen-fixing:** naturally self-fertilizes and can grow in poor soil
- **Drought tolerant:** requires less water than grass to stay green
- **Resists pet urine**
- **Reduces soil compaction:** prevents run-off and erosion
- **Attracts bees*:** important for pollination of many native species

*NOTE: regular summer mows at 1.5 to 2 inches prevents clover buds from flowering and reduces bee density

Appendix

Table 1: Estimated Yearlong Resources to Plant Kentucky Bluegrass and White Dutch Clover at the Engineering Quad

	Kentucky Bluegrass	White Dutch Clover
Seed	377 lbs ¹	68 lbs ²
Topsoil	0 cubic ft	8 cubic ft
Water	12,460,051 cubic ft ³	6,820,017 cubic ft ⁴
Fertilizer	1314 lbs ⁵	0 lbs
Pesticide	20 lbs ⁶	0 lbs
Overseeding Frequency	1	2
Mower Hours	66 hrs ⁸	36 hrs ⁹
Mower Fuel¹⁰	66 gallons	36 gallons

Table 2: Estimated Cost for Kentucky Bluegrass and White Dutch Clover at the Engineering Quad

	Kentucky Bluegrass	White Dutch Clover
Seed	\$1520 ¹	\$300 ²
Topsoil¹¹	0	21
Water¹²	313,193	171,427
Fertilizer¹³	1305	0
Pesticide¹⁴	70	0
Labor¹⁵	2583	1409
Total Cost	\$318,671	\$172,421

Table 3: Estimated Yearlong Resources to Plant Kentucky Bluegrass and White Dutch Clover per Acre

	Kentucky Bluegrass	White Dutch Clover
Seed	50 lbs¹	9 lbs²
Topsoil	0 cubic ft	1 cubic ft
Water	326,700 cubic ft³	108,900 cubic ft⁴
Nitrogen Production	0 lbs	60 lbs
Total Fertilizer	175 lbs⁵	0 lbs
Pesticide	2.7 lbs⁶	0 lbs
Seed Depth	½ in	¼ in
Overseeding Frequency	1 year	2 years
Honey Production per Colony⁷	0 lbs	16.7 gallons
Mower Hours	14⁸	10⁹
Mower Fuel Consumption¹⁰	14 gallons	10 gallons

Table 4: Estimated Cost for Kentucky Bluegrass and White Dutch Clover per Acre

	Kentucky Bluegrass	White Dutch Clover
Seed	\$190¹	\$35²
Soil¹¹	0	4
Water¹²	8212	2737
Fertilizer¹³	180	0
Pesticide¹⁴	35	0
Labor¹⁵	548	391
Potential Honey Yield¹⁶	0	-768
Total Cost	\$9165	\$2399

- ¹ Amount and cost values are based on Kentucky Bluegrass - Midnight, sold at \$190 for a 50lb bag of seed, supplied by OutsidePride.com, Inc.
- ² Amount and cost values for White Dutch Clover seed, sold at \$150 for a 50lb bag and \$35 for 10lbs, were calculated based on values supplied by OutsidePride.com, Inc.
- ³ Kentucky Bluegrass yearly water intake calculated based on findings by Texas AgriLife Extension Service, Texas A&M.
- ⁴ White Dutch Clover yearly water intake calculated based on information provided by Outsidepride.com, Inc.
- ⁵ Kentucky Bluegrass fertilizer requirement provided by Seedland, Inc.
- ⁶ Kentucky Bluegrass pesticide value based on (Pimentel et al. 1991).
- ⁷ Honey production values based on White Dutch Clover are based on (Pellett 1920). Pounds were converted into cups assuming 1.33 cups are present in one pound. Cups were then converted to gallons.
- ⁸ Kentucky Bluegrass mowing hours are based on calculations by Landscape Calculator. The assumptions are that the mower is 5 feet in width, is moving at a speed of 7 mph, and the lawn is mowed every week for a total 30 weeks. Also included as constants are the short cut preparation period, power thatching period, and over seeding period, totaling out to be 6 hours. The estimated rate is 3.82 acres mowed per hour.
- ⁹ White Dutch Clover mowing hours are based on calculations by Landscape Calculator. The assumptions are that the mower is 5 feet in width, is moving at a speed of 7 mph, and the lawn is mowed for a total of 15 weeks. Also included as constants are the short cut preparation period, power thatching period, and over seeding period, totaling out to be 6 hours. The estimated rate is 3.82 acres mowed per hour.
- ¹⁰ Fuel consumption rates are based on the assumption that a commercial lawn mower consumes fuel at a rate of 1 gallon per hour. This value was the average of several testimonials.
- ¹¹ Soil price was calculated using Scotts 0.75 cu. ft. Premium Topsoil, provided by The Home Depot U.S.A. Inc. Pounds were converted into cubic feet under the assumption that 1 cubic foot of topsoil is 85 pounds, an averaged value based on professional experience.
- ¹² Water prices are based on non-exempt industrial rates provided by New Jersey-American Water Company, Inc. Base charges are not included in their rate of \$2.51358 per 100 cu ft. Cost values assume that there is no rain over the course of the year.
- ¹³ Fertilizer cost was calculated based on Pennington Lawn Food Fertilizer, sold at \$45 for 46 lbs, provided by Seedland, Inc.
- ¹⁴ Pesticide expense is based on Monterey Once-a-Year Insect Control, available by The Home Depot U.S.A. Inc for \$35 per 128 oz. bottle. We assume that 1 oz of fluid is equal to 1 oz of weight and ignore the cost of pump canisters.
- ¹⁵ There is a contractor rate, based on Homewyse's Job Cost Calculator, that is assumed to be \$39.13 for every hour. We've taken this to assume it includes fuel, labor, and repair costs. The 16.7 values are multiplied by the total number of mowing hours.
- ¹⁶ Honey yield is based on the assumed value of \$46 per gallon for raw, unprocessed clover honey. The price has been set by the family run New Bee'n Farm. Ignored are maintenance fees.

Letter to the Editor: Published by The Daily Targum on March 26th, 2013

Clover lawns beneficial

Column

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Posted: Tuesday, March 26, 2013 12:00 am

By Steven Daniels | 0 comments

A well-maintained lawn is part of the American dream. It's a symbol of the suburban lifestyle, and it shows off the property owner's control over nature. A green lawn is a constant battle with the environment, but it doesn't have to be. Clover is a low-maintenance alternative lawn that retains the green lawn aesthetic, without infringing on your wallet or your weekend while benefitting the environment.

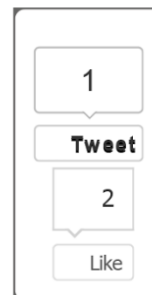
Unlike commercial grasses, clover doesn't require excessive resources. It produces its own fertilizer. Normal grass fertilizers wash away during the first rain shower. Materials purchased for that lawn are essentially being flushed down the drain. Much of that sewer water then ends up in the local water supply, encouraging bacteria to grow and suffocate fish populations. By using clover, you can save money on your lawn while also befriend the local wildlife.

Clover needs very little water to survive. Often referred to as a weed, clover is extremely resilient to seasonal changes. It can survive both flood and drought and stays green while doing it. Clover is like the camel of lawns — effectively holding moisture, but without the whole spitting-on-tourists thing. The plant's toughness means that it doesn't have to be watered by property owners to look great. Without a sprinkler, you can save money on water and save our most essential natural resource.

Clover lawns require less frequent mowing than a traditional grass lawn. While grass grows vertically, clover grows laterally. This means you can expect fewer cuts per year and less spotty coverage with clover. Fewer cuts not only reduce budgets spent on gas, bags and repairs, but something even more valuable: time. With that extra time, a homeowner might actually be able to appreciate the lawn they've sculpted by playing catch or relaxing in the shade.

Compared to grass, clover is an easy, cost-reducing way to enjoy your lawn. It leaves more money in your pocket, is less of a hassle to maintain, and as a nice side benefit, is a more sustainable practice. When we think of sustainability, we tend to think in terms of large complex objects and technology. Businesses and homeowners are offered incentives to install expensive solar panels on their properties, and automobile manufacturers offer more hybrid and electric alternatives, for a price. These are steps in the right direction, but truly effective environmental changes will occur more subtly. Much like re-engineered water bottles and cloth grocery bags, alternative lawns represent a small change that can provide substantial gains.

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