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IS THE NO MOW YARD EASIER?

Ralph E. Engel

Some make a standing joke of lawn care as one of life's miseries, and implications are made that lawns are not justified. These remarks imply that lawns are ill-conceived and many owners like to hear any suggestions of a substitute. The no-mow or natural landscape is one of the latest. Homeowners should consider several factors before exchanging a mowed lawn for unmowed home grounds.

To some the no-mow yard includes any plant that will grow. This will be a great variety of species in Northeast United States. While some of the things that grow are not relished generally, those who let nature take its course must learn to enjoy or tolerate whatever appears. Of course, many variations in the species are introduced by those who deviate and introduce favorite species from nursery stock or collect from natural growth. Allowing unmowed vegetation to run its course will lead to climax forest trees in our area. Often this is unacceptable near houses in our climate. The canopy of large trees, which has its desirable features, will cause dampness, and will create the possibility of dropping large branches, limbs, or even entire trees on the house. In most cases, considerable selection or control of species will occur on the home land-

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Figure 1.
Open space to the front of the house, the house and the natural tree growth are three feature ingredients. Prime quality is scarcely a necessity — a green lawn is the tapestry.

The Case for No Mow

Wayne G. Douglas

I doubt that there exists a landscape architect who would seriously advocate the abolition of turf in the landscape, particularly at the residential scale. There are many, however, who might question its ubiquity. "I am the grass; I cover all." Carl Sandburg might have been describing the suburbs of New Jersey, where 'house' and 'lawn' are indivisible in the collective consciousness; alternatives are rarely considered, much less achieved.

The results can be unsatisfactory from several viewpoints. Aesthetically, such homogeniety soon goes beyond restfulness to tedium. Ecologically, vast expanses of lawn form a desert empty of the plant and animal species found in more diverse communities. Environmentally, the maintenance of an unstable monoculture requires input of harmful chemicals. Environmental disadvantages are exacerbated by some social attitudes. One could be termed Lawn-as-Fetish, where neighbors engage in chemical warfare and intensive watering in a competition for the greenest lawn. Its obverse is Disengagement, where homeowners abandon the struggle to professional lawn services whose profit is derived from the volume of chemicals sold.

It is a safe bet though, that in the public view, none of the foregoing is as disadvantageous as the weekly mowing chore. Suburbanites belong to an increasingly mobile and fast-moving society where two-

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Comments and Opinions

Turf Disease Organisms in Irrigation Water — Dr. E.L. Shannon, Plant Patholgist, New Mexico State University has traced lawn disease organisms to irrigation water. *Helminthosporium, Fusarium, Pythium,* brownpatch, powdery mildew, rust, algae and slime molds can be found. While this source may increase the need for more disease control, a question arises on the possibility of water treatment or management to discourage this source of disease.

REE

CLIPPING REMOVAL

Clipping removal from bentgrass fairways was discussed by a panel of golf course superintendents at the December Expo. The presentations were excellent and the results reported have more golf courses considering the use of this procedure. My article on the subject in the *Greener Side* and *Green World* in the spring of 1983 mentioned periodic removal. Catching clippings might be most important at such times as (1) the big flush of annual bluegrass seedheads or (2) removal of clippings starting two or three weeks prior to the start of hot weather.

It might be noted that some of our members who maintain lawns have removed clippings for quite a few years for prime turf. Does anyone from this group have opinions or observations on benefits to lawn turf other than the cosmetic effect?

REE

The object of oratory is not truth but persuasion.

Thomas B. Macaulay

ABSTRACT: Turfgrass Seed Germination Response to Varied Temperatures

by J.L. Eggens and D.P. Ormrod. Turfgrass Research Annual Report, Ontario Agriculture College, University of Guelph. (1982)

Annual bluegrass (*Poa annua* L.); creeping bentgrass, (Penncross) (*Agrostis palustris* Huds.); and Kentucky bluegrass (Baron) (*Poa pratensis* L.) seeds were germinated with varied day/night temperature regimes of 25°/18° C (77°/64° F), 34°/28° C (93°/80° F) and 40°/30° C (104°/86° F) with a 12-hour thermo period. The three species of seed germinated 92, 96 and 94%, respectively, with the cooler regime. With the increased heat stress of 34°/28° C, germination was 54, 75, and 42%. With the highest temperature regime of 40°/30° C creeping bentgrass seed germinated 74%, while the other two species failed to germinate.

COMMENTS:

This study supports results I obtained over 15 years ago which showed annual bluegrass germination was nil with steady 86° F while Colonial bentgrass still gave approximately 45% of normal germination. These respective grasses germinated 43 and 60% at constant 59° dark as compared with their best germination (alternate 59 and 86° F. plus alternate dark and light). Our purpose in conducting the test was to determine if late August or October reseeding was best for seeding bentgrass fairways that were troubled with annual bluegrass. On a number of occasions, I had judged excellent success with August seeding. On other occasions, those who treated with repeated applications of sodium arsenate during late August and September, and then seeded bentgrass in October, seemed to have an abundance of annual bluegrass. A difference in germination temperatures for the two grasses was considered a possible explanation.

This theory was supported by my test and again in this 1982 test report of Dr. Eggens. Also, the ability of annual bluegrass to germinate significantly at 59° F. suggests that it was unlikely to experience a germinating temperature disadvantage in early October. Other factors such as comparative wetness between August, September, and October could influence germination for these months in a given year or years.

REE

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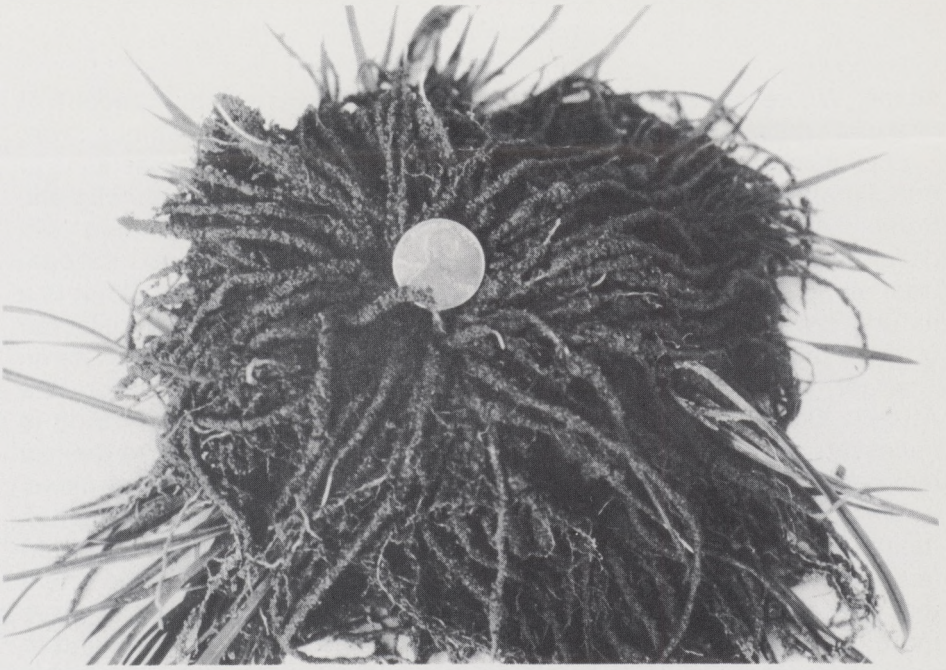
It is the studying you do after your school days that really counts. Otherwise, you know only that which everyone else knows.

Henry L. Doherty



Grass Roots With A Difference . . . Rhizosheaths

Robert W. Duell and Gary R. Peacock

We usually think of grass roots as being fibrous with much branching. We don't think of them as looking like the dirty end of a mop!

Rhizosheaths, shown here, are sheaths or cylinders of soil formed around grass roots. They have been reported on other species. Indeed, until our recent work they were thought to occur only a a few desert grasses, in sandy soils, and in extremely dry climates. We found rhizosheaths on many species of turfgrass, forage grasses, and small grains; on clay loam, and in somewhat poorly drained sites.

Rhizosheaths are held together by a proliferation of root hairs and/or mucigel which bind soil particles and aggregates. Nitrogen fixing bacteria, *Azospirillum,* were identified in rhizosheaths, and soil rubbed off such roots had an elevated nitrogen content.

There is in men as in soils; there is sometimes a vein of gold, which the owner knows not of, and in your nature, there lies hidden rich mines of thought and purpose awaiting your development.

Jonathan Swift

New discoveries in science will continue to create a thousand new frontiers for those who still would adventure.

Herbert Hoover

Part of the Cost of Losing an Herbicide

The 1979 cancellation of 2,4,5-T, which was used to control unwanted "weed" competition in our forests, has been estimated to have caused a loss of 13 million cubic feet of lumber the first year or $116 million net worth of timber. (The 1979 USDA-States-EPA Impact Assessment Report. USDA Forest Service, Washington, D.C.)

scape. Where more severe plant control is exercised, the concept of "natural" grasslands is suggested as a substitute for the common lawn.

Low maintenance lawns are the nearest thing to natural grasslands in our climate but without mowing, grasslands do not persist in our climate. Some "non-turfgrasses" such as *Andropogon* and *Danthonia* will develop with less intense mowing and will provide color and textural contrast along with the more efficient and dominant turf species. What is a natural grassland? Virtually all of our turfgrasses have been selected from or occur in natural grass areas. Apparently use of the name "natural" gives the impression that mowing is not required. From the Atlantic Ocean to the dry plains east of the Rockies some mowing is necessary to maintain grasslands. This does not allow us to call the low maintenance lawn or "meadow" a natural grassland, but it is pretty close.

Grass lawns are grown for a number of purposes. The uniform green tapestry provided for the landscape is probably the most pertinent reason in the mind of the homeowner. Many like the open space effect that is maintained by the lawn. Grass tolerates more traffic and gives more persistent quality compared with other plant substitutes found to date. It is our most practical protection against soil erosion, and it is nature's most efficient way of soil improvement.

Establishment and Management of the Unmowed and Mowed Sites

Either mowed or unmowed yards can be established slowly or quickly, cheaply or expensively, with prime or with ordinary quality. Both types can be established most months of the year, but some seasons are more favorable than others. Plant material is readily available for the commonly-used lawn grasses. This is also true for many types of plants desired in the no-mow landscape. However, the general desire for native or naturally occurring plants that are not available in nurseries could lead to their near extinction in the open areas of the state unless they are introduced into nursery production. Plant failure can occur with both types of plantings. While the grasses are herbaceous, they are not always the most susceptible to the vicissitudes of winter and summer.

A claim for the no-mow landscape is easier maintenance. Possibly some no-mow landscapes require less attention to watering for longer periods of time than many lawns. Also, they do not need seven- to 21-day intervals of mowing as do most good lawns. These are not the only important work requirements. The no-mow yard catches more litter, makes necessary leaf removal more difficult, and suffers a much greater assortment of weeds. Most of the common turf weeds are likely to appear. In addition, other weeds that do not persist in turf and many non-weed species, which are undesirable in the landscape because of their appearance or competitiveness, become a problem. If unwanted weedy young trees are not dealt with promptly, they can require a lot of work later. The low maintenance lawn, cut infrequently at three to four inches, controls a wide range of weeds and unwanted species. In our humid climate, this type of lawn requires little except high cut and infrequent mowing. Often if will develop clover, native grasses and other plants that some appreciate aesthetically.

Mowing is one of the most effective weed control measures, and it eliminates most of the need for special effort to control such obnoxious weeds as poison ivy, nightshade, thistles, honeysuckle, beggar's tick and others. Several of these weeds are very difficult problems on the no-mow

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career families are becoming the rule. Mowing may be, in general terms, the most practical management strategy, but for these people the sustained requirements of a mowed lawn are increasingly onerous. Add to this an awakened conservation consciousness which considers ethical as well as economic implications of maintenance costs like these: lawnmowers are estimated to use 200 million gallons of gas per year, while summer sprinkling triples water consumption.

It is hardly surprising that interest in the no-mow yard is growing. Exactly what is meant by the term, however, is unclear. Various strategies have been in use for many years: the Japanese garden approach of stones, rocks and controlled planting, the evergreen ground cover of ivy or pachysandra (shade) or low-growing juniper (sun), the mini-mow compromise where a minimal lawn is incorporated into a landscape of built elements — paths, decks, patios — and diverse plantings. All of these approaches can eliminate or reduce mowing and result in effective and satisfactory home landscapes.

One senses, however, that the current excitement about no-mow is focused on the more radical dream of a wholly natural, maintenance-free yard, a miniature prairie or forest. And what an appealing idea it is, especially as described in the popular press: no watering, no weeding, no fertilizing, all combined with summer-long bloom and winter interest. It's all true, too, *once planting is established.*

Initial planting or seeding (assuming supplies are available from the dwindling stocks of natural species) requires fairly extensive and expensive techniques, followed by years of weeding, watering and occasional mowing. In areas of disturbed soil — which

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home site. They can be controlled, but herbicides may be required, and persistent effort and know-how is needed to control them effectively. Lawns do not provide the required cover for unwanted creatures such as ticks and rodents.

The weed problem of the no-mow landscape becomes more diffiult as it ages, because a variety of persistent perennial weeds and unwanted trees will overgrow the site in our wet climate. After a period of years, a dense stand of large climax tree growth will shade out many weeds, but most people do not want a continuous cover of large trees close to the house. If a tree canopy is used to prevent unwanted weeds, some type of low ground cover is usually needed to prevent soil erosion around home sites. These non-grass type covers tolerate little, if any, wear.

Lawns are criticized for such things as fuel and water consumption. My lawn mower uses less gasoline in a year than my leaf blower-vacuum

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Figure 2.
A grassed area without mowing for several years. Note the wild blackberry seedling trees. One or two mowings per year would return and maintain this in a meadowlike condition and reduce the fire hazard. Without mowing it will go through several stages of tree growth.

lawns are — a natural plant community may not be fully established for several decades. In New Jersey's climate, natural succession is to forest, not prairie. Without annual burning, an unlikely procedure in the suburbs, trees will continually invade 'natural' prairies; if mowing is necessary, thatch must be removed.

The news is not all bad though. The sites least suitable for turfgrass — steep slopes, dry and infertile soils, heavily wooded areas, wet spots, shore sites and transition areas — are those best suited for natural landscaping. Scale is a factor as well. The private homeowner can incorporate prairie or woodland communities in small portions of the landscape, increasing the area with experience. On very large sites like corporate centers with their hundreds of acres of grass, manpower and machinery can be diverted to larger scale experiments with natural grasslands.

Those interested in this purest version of no-mow will find an invaluable resource in a book by two landscape architects, John Diekelmann and Robert Schuster. *Natural Landscaping: Designing with Native Plant Communities* (McGraw-Hill, 1982) provides a clear and absorbing explanation of what is involved in the establishment of native plant communities. The intricate balance achieved in nature makes this a complex task. But the rewards are worth it and our landscaping efforts appear clumsy and labored by comparison.

Natural landscaping is not a new idea, but it is newly popular as an appropriate technique for our time. Its seeming difficulty may not be so much inherent as a state-of-the-art problem due to neglect. Clearly, there is a need for more professional involvement in experimenting with wild species, particularly in the case of grassland com-

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Figure 3.
This scene shows a ground site that is predominantly unmowed. It shows the rate of turf, but it also suggests both the beauty and the work that is involved where prime unmowed landscape becomes the major component.

The Case for Mow
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machine that requires many hard hours of work. The gasoline used by turf mowers is a valuable resource but the quantity is insignificant when compared with gas used for less essential driving.

Turf makes no claim to water required for vital uses. When water shortages occur, lawn watering is usually one of the first items curtailed. Often this restriction is placed on turf before a number of less valuable uses. When turf is watered, it cools the site and gives a useful assist to recharging the ground water.

Turf cover has a vital role in reducing the ever greater and rapid rainfall runoff that causes flooding and soil erosion when heavy precipitation occurs. It seems man's modern efforts continually increase the amount of hard surface cover such as buildings, parking lots, road, patios, steps, and other structures that are placed over the soil, making it less permeable and causing greater runoff and flood problems. Turf makes a vital and major contribution to erosion control where undisturbed forests end in our region.

Most sites of our region will grow a high cut, low nitrogen turf that survives adequately without watering. This type of turf can be grown in communities or areas that have an inadequate supply of fresh water. Many communities still lack facilities for utilizing the available annual precipitation that can be used for beautification with plants. It seems reasonable to irrigate turf as needed to grow good turf cover, as the water supply permits, rather than letting it run to the ocean.

The mowed lawn cannot be considered an illogical modern fad. While the no-mow yard undoubtedly preceded the grass lawn, mowed lawns became popular over the centuries because this type cover pleased people. Obviously, the use of lawns did not suddenly become a modern-day fetish. Many grow lawns because they enjoy them more than other types of plant cover. Some prefer lawns because they find use of the power mower, the major chore of the low maintenance lawn, easier than the

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munities. Few groups would be more welcome by their qualifications for such research than those working in turfgrass. Rather than defending their turf, they could expand it, immeasurably, by including in their research the establishment and propagation of wild grasses.

Landscape Architect
Princeton, N.J.

THE BIBLE says "God loves a cheerful giver." But nowhere does it say "God loves a cheerful loser." I have my reservations about a person who is a "good loser." He'll lie about other things, too.

J. Fielding Reid

hand chores required by other types of plant cover. This attests to the amount of hand work required on unmowed landscapes that some people dislike. After considering the various viewpoints, we might summarize with the basic thought that turf cover gives more satisfaction with less cost than any other type of cover for open areas that are used frequently by people. Of course, this is a preference and takes nothing away from the no-mow lawn if that is a person's choice.

Turf and the landscape reflect an individual's personal taste. I can enjoy some no-mow sites if they are not too cluttered. However, I do not want this plant cover for my front yard or next door. Some open lawn space around the home is my preference, and I believe this is true for many others. This is especially true for the front area around homes. An area of uniform turf cover is peaceful to the mind, because it is a break in the busy detail existing around most home sites and in our lives. Also, we should not overlook the fact that open space has aesthetic appeal to many. This does not rule out some foundation plants for the building, occasional specimen plants and a section of natural vegetation if space is adequate.

Fire protection is often a forgotten reason for lawns and open space. In our climate fire is rarely sustained by the typical cool-season lawn. In contrast, unmowed open or wooded areas are vulnerable to fire during many weeks of the year. Also, open space is some deterrent to mischief and burglars.

My purpose in this article is not to propose a ban on no-mow home yards, or to say all landscapes must have a lawn. Nor do I believe most lawns must have prime turf. Like many others, good turf is a pleasure to me, and growing an attractive lawn adds class and usefulness to the home garden. Maintaining an attractive lawn is like growing a rose for others to enjoy. And it is wholesome pastime similar to other forms of gardening. I have hoped to encourage thought on unmowed yards before time and money is spent on a false hope of less work and/or the hard realization that the clean grass covered open space they gave up was a most enjoyable feature. Also some of these statements might help those who wish to grow the low-maintenance rather than an intensively maintained lawn. Are we spending enough time teaching and establishing the low maintenance lawn for those who wish?

To gain one's way is no escape from the responsibility for an inferior solution.

Winston Churchill

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A Singular Honor

Dr. Glen Burton, Rutgers alumnus, noted plant geneticist, Distinguished Professor of Agronomy at the University of Georgia and Research Agronomist at the USDA Coastal Plain Experiment Station of Tifton, Georgia, received the National Medal of Science from President Reagan during 1983 ceremonies at the White House.

The National Medal of Science is the nation's highest award in recognition of outstanding contributions in biological, physical, behavioral or social sciences, mathematics and engineering. A national science committee makes the nominations. Twelve scientists and engineers received the award this year.

Dr. Burton was cited for his nearly 50 years of valuable work as geneticist and plant breeder. He is internationally known for such things as development of Coastal bermudagrass as a forage grass and he developed improved pearl millets that have become an important grain crop in India, Pakistan and Africa. His millets had the capability of doubling the grain yield of this crop in those countries.

Dr. Burton was born in Nebraska and did his undergraduate work at the University of Nebraska. Some may remember the classical bulletin on annual bluegrass that came from Dr. Burton's work on annual bluegrass, when he was completing his Ph.D. at Rutgers University. Also, many of us in turfgrass are aware of the many excellent bermudagrasses he developed for Southern turf use. While Dr. Burton is retired, he still spends time developing new grasses. In 1983, he sent us additional hybrids and strains that we planted on the Ryders Lane area to assist with his evaluation of their winter hardiness.

It is great pleasure and pride for us in turf to know this very able, productive, sincere and humble person has received highest recognition.

REE

A TEXT .....

Labour not to be rich: cease from thine own wisdom. Wilt thou set thine eyes upon that which is not? ***for riches certainly make themselves wings; they fly away as an eagle toward heaven.***

Proverbs 23:4,5.

We need to teach our children that they can't cheat. There is no way to pull it off; you can't lie to life.

Edward R. Sims

A politician is a man who has a gentle ingratiating voice and an easy flow of innocuous conversation unimpeded by pestiferous ideas.

William Allen White

There is a strength of quiet endurance as significant of courage as the most daring feats of prowess.

Henry Tuckerman

The perfecting of one's self is the fundamental base of all progress and all moral development.

Confucius

The biggest cause of trouble in the world today is that the stupid people are so sure about things and the intelligent folks are so full of doubts.

Bertrand Russell