Meet the Natives

Native Grasses

Native grasses are some of the most abundant of Arizona native plants. Grasses form a distinctive grassland community in southern Arizona and are found throughout the state. Most are trouble-free, non-demanding plants in the landscape with many being as tough as many of our native perennials. Most of our native grasses are summer growers and like to be cut to the ground in the winter for rejuvenation, promoting active growth in the spring and summer.

Bunch grasses such as Deer grass (Muhlenbergia rigens) provide dramatic accent to a desert garden as living garden sculpture to soften up the bold forms of native trees and cacti. Delicate grasses such as Arizona cottontop (Trichachne (Digitaria) californica) provide a naturalistic feeling to a garden particularly around a water feature which are relished by desert birds. Native grasses such as Curly mesquite and Buffalograss have some merit as turf for functional turf areas (600-800 sq. ft.) in residential landscapes using Xeriscape principles. However, no native grass provides the deep green, smooth, playable turf area provided by hybrid Bermudagrass in the Phoenix area.

One issue that concerns grasses in Arizona: use of non-native invasive grasses such as Red brome (Bromus rubens) and Green fountain grass (Pennisetum setaceum) in the landscape. Granted, the cat is way out of the bag with these grasses that have to lead to increased fuel loads in wildfire fires. However, it becomes the responsibility of horticulturists, wildland managers and home gardeners to make responsible decisions on the use of grasses in Arizona landscapes. Many native grasses are now being offered as seed and are sown with our spring and summer wildflowers during the fall. Native grasses work with wildflowers and together provide a naturalistic feeling to a desert garden. The genus Muhlenbergia is being grown commercially with many significant selections being offered for Arizona gardens. There are some 90 genera of Arizona native grasses. Some selections of Arizona native grasses suitable for cultivation in the Phoenix area are the following:

Aristida purpurea — Purple Three Awn is commonly seen in Arizona from 1,000- to 5,000-ft. and is commonly encountered across the southwest and Midwest. This distinctive bunch grass grows to about 2-ft. in height and is distinguished by its deep purple-colored three awns. Purple Three Awn provides a distinctive color to a desert garden in the spring with wildflowers and is a striking purple wave in the wind. Gardeners should remove older clumps of Purple Three Awn if they become to invasive in their desert gardens.

Bouteloua curtipendula — Sideoats grama is a tall bunch grass reaching 2- to 3-ft. in height. Sideoats grama is widespread throughout Arizona and throughout North America, Central America and South America. The young flowering spikes have a pink to purple hue when young and the spikelets hang to one side of the spike resembling a series of flags hung along a pole thus the name Sideoats grama. This grama grass can be displayed against a garden wall for excellent background effect and its rosy pink color during the winter lives up a desert garden.

Bouteloua aristidoides — Needle grama is commonly seen across Arizona below 6,000-ft. and across Texas and southern Arizona. This low-growing annual grama grass has distinctive spike-like branches and is best planted away from pedestrian areas. Needle grama flowers from summer through fall.

Buchloe dactyloides — Buffalograss is a wide ranging grass across the Great Plains and into northern Mexico. Buffalograss is rarely found in Arizona. This Arizona native has been found in only two restricted localities in Coconino and Gila counties around 5,500-ft. This range grass forms a gray-green mat in the landscape. Buffalograss is being tested as a turf grass in the Phoenix area. Buffalograss seems to perform better on eastern exposures where it get some relief from the hot afternoon sun. Some researchers report Buffalograss can live on 12 in. of annual precipitation. Time and testing will tell how successful Buffalograss is in Phoenix area landscapes.

Trichachne (Digitaria) californica — Arizona cottontop is found throughout Arizona from 1,000- to 6,000-ft. and throughout the inter-mountain West. Arizona cottontop typically grows to 4-ft. tall and flowers in late summer through fall with a showy plume of snow-white flowers. The soft, silky, purplish hairs of the spikelet give this grass a dramatic illuminated appearance, hence the name cottontop. This delicate native grass is excellent for use in the mini-oasis of a desert garden.

(Continued on page 9)
Erioneuron (Tridens) pulchellus — Fluffgrass is one of the toughest native grasses found throughout Arizona up to 5,500-ft. and throughout the inter-mountain West. This wiry little bunch grass grows up to 6-in. in height. Fluffgrass has dense fuzzy tufts at end of wiry, leafless stems which seen in clusters give a fluff appearance to this grass. Fluffgrass is excellent for revegetation in a desert garden and is a favorite forage plant for desert tortoises.

Hilaria belangeri — Curly mesquite is a groundcovering light green native grass under 6-in. Curly mesquite somewhat resembles Buffalograss but grows in more arid climates from southern Arizona to central Texas and northern Mexico from 2,000- to 6,500-ft. This Arizona native prefers clay soil and has some merit as a turf grass or ground cover in the landscape.

Hilaria mutica — Tobosa is a dense clumping grass of the grassland of southern Arizona from 2,000- to 6,000-ft. and ranges across northern Mexico and into west Texas. Tobosa typically grows 1- to 3-ft. in height and is a warm season grower. This native grass is readily adapted to grow on clay soils.

Hilaria rigid — Big galleta is a long-lived bunch grass found across the deserts of North America below 5,500-ft. Big galleta makes impressive dense clusters in the landscape up to 3-ft. in height. This massive bunch grass blooms from late winter through late summer and requires good draining sandy soils for best growth.

Muhlenbergia dumosa — Bamboo muhly resembles dwarf bamboo and is a distinctive muhly grass for a desert garden. Bamboo muhly is commonly seen from 3,000- to 5,000-ft. in southern Arizona and northwestern Mexico. Reaching 3- to 6-ft. in height, this Arizona native flowers from January to May. Bamboo muhly periodically likes to be cut to the ground for rejuvenation. This muhly grass is suitable for large garden pots and planting as a mini-oasis plant adjacent to a water feature in a desert garden.

Muhlenbergia emersleyi — Bull grass is a deep green bunch grass commonly seen in the canyons of southern Arizona, west Texas and northern Mexico from 3,500- to 6,500-ft. Bull grass grows to 3-ft. in height and width. Bull grass can be used as a good slope cover for erosion control. This native grass flowers from late summer through early winter with variable reddish to violet purple flowers.

Muhlenbergia porteri — Bush muhly is found throughout Arizona from 2,000- to 6,000-ft. and across the inter-mountain West. This fine-stemmed bunch grass grows to 3-ft. in height and width. During active growth in late spring and summer, the foliage and seedheads of Bush muhly take on an attractive purplish hue. Bush muhly flowers in late summer and integrates well with other native shrubs such as Creosote Bush and Fourwing Saltbush in a desert garden.

Muhlenbergia rigens — Deer grass is one of the most striking native grasses for desert gardens. This bold light green grass is commonly seen along streams and creeks throughout Arizona from 3,000- to 7,500-ft. and across Sonoran and Chihuahua Deserts. Deer grass grows to 5-ft. in height and width and flowers from midsummer through fall. This Arizona native is an outstanding accent grass for a desert garden and also works well in a mini-oasis with a water feature.

Kent Newland
Former President, Arizona Native Plant Society, Phoenix Chapter

Tookie Appelbe (Continued from page 4) watching the transition from spring into summer. Summers she treats as a dormant period, maintaining her plants by watering and fertilizing.

About 5 years ago Tookie trimmed the rose bush which her father had given her mother on their wedding day. She brought back the hard cuttings wrapped in wet newspapers and garbage bags. After a couple of months stay in the refrigerator, some friends took the cuttings to California and grated them on rootstock. She now has 7 plants of this old rose with flowers that are a mixture of apricot, red, yellow and orange. She is hoping that someday someone can identify this rose for her.

Val Carsey
Master Gardener
Fun at Bank One Ballpark

A lot of effort and money has been and is being expended to find a turf grass that will grow successfully in a domed stadium. The Arizona Diamondbacks baseball organization is the latest focus of this experiment, in their new retractable domed Bank One Ballpark (BOB). A hybridized zoysia turf grass has been developed by the University of California-Riverside (UCR) that is professed to be shade tolerant, yet almost equal in beauty and wear resistance to the hybrid Bermuda turf grass normally used on outside athletic fields.

The cost of this endeavor hasn’t been cheap. The Diamondbacks spent $160,000 for a grant to UCR for turf grass development, then spent another $170,000 to purchase 110,00 sq. ft. of sod for the ballfield surface in the stadium. This sod was delivered in 30- to 50-ft. long rolls that were 42-in. wide; 1,100 rolls were required.

This zoysia turf grass will require special treatment and tender care if it is to be successful. The soil preparation is way beyond what most homeowners could accommodate. The sod is laid on a 14.5-in. sand base, which is on top of 4-in. of pea gravel containing corrugated drainage pipes to handle large volumes of water. This sand-based soil system provides better drainage and compaction than other soil types, but a disadvantage is that nutrients will leach through the sand faster, resulting in the need for more frequent fertilizer application.

Then there is the problem of sufficient sunlight and soil temperature. So far Mother Nature hasn’t been cooperating. The combination of higher than normal rainfall this spring and cooler than normal daytime and nighttime temperatures has delayed the growth of this zoysia turf grass.

The baseball season started as scheduled, with resultant wear and damage to this normally slow-growing turf grass. Several high traffic areas required new replacement sod, and the entire field still doesn’t have that good green appearance that zoysia normally exhibits.

Sunlight on the turf is a problem in some areas of the stadium, even with the roof open. Special light trailers have been built to supply artificial light to shaded areas. Remember that warm season turf grasses like full sun, with daytime temperatures above 70°F. As of June, we still aren’t experiencing these temperatures, so the zoysia turf grass is struggling.

This hybridized zoysia variety, called “De Anza,” will probably not be available to the general retail market. Another variety more adaptable to homeowner care is reported to be under development. Introduction is probably several years away.

Cooperative Extension publication number 8397 “Zoysia-grasses” details the origins of zoysia turf grass and discusses the pros and cons when grown in an urban landscape. This turf grass is slow-growing, making it easier to maintain, but on the other hand it is slower to recover from damage or dethatching. A review of this publication shows the problems encountered trying to establish and maintain a healthy zoysia lawn, but when compared to the problems encountered trying to establish and maintain a turf area the size of Bank One Ballpark, with its temperature and sunlight problems, the homeowner has it easier.

Danny Schnell
Master Gardener

Alternatives to Tif Grasses (Continued from page 13)

WalMart had ‘Yuma’ and ‘Nu-Mex Sahara,’ Home Base had ‘Nu-Mex Sahara,’ and Harper’s on 16th Street and Thomas Rd. had ‘Yuma.’ I couldn’t find any of the others in our area. Availability in the Phoenix area was at best disappointing. There are distributors (like Turf Partners) who will order the new types that are available in 50-lb. quantities but that isn’t much help to the homeowner. The main market for these grasses appears to be golf courses. If the new improved grasses are all they are claimed to be and the public were aware of these qualities one would think there would be a great demand for the product and it would be widely available.

Sources of information used in this article include the home pages of “Seeds West” (www.seedswest.com), Tom Bodderjy of Seeds West in Yuma, AZ, Dr. David Kopec’s Master Gardener course on Turf and comments from Mike Hills a fellow Master Gardener and grass expert. Stay tuned for the results of my own experiment which was the over-seeding of my “common” Bermuda front lawn this year (1998) with a mix of ‘Sahara’ and ‘Yuma’ improved Bermudagrasses.

Glenn Stanley
Master Gardener
New Introductions - Turf Varieties

Sonoran™ Zoysia is a deep-rooted, medium to fine textured zoysia grass that forms a thick lush lawn. It is similar to Bluegrass in texture, though not as dark green in color, and is very hardy. Few disease or insect problems seem to affect Sonoran™ Zoysia, nor does the harsh alkalinity so often found in our southwestern soils and water.

Sonoran™ Zoysia can be mowed with a rotary or reel mower and enjoys a wide variety of mowing heights, ranging from ¾- to 2-in. While the "½ rule" applies to the mowing of all varieties, Sonoran™ can tolerate severe mowings without scalping better than most varieties. This zoysia requires more or less the same water schedule as do the hybrid Bermudagrasses. Water deeply, but no more often than required to avoid wilt. Monthly fertilizations of a balanced (3-2-1) fertilizer is recommended applying 5-10 lbs. of nitrogen per month.

Sonoran™ Zoysia will not be available until 1999; however, once available, it takes Arizona’s heat well and will be available year round — in the winter only as an overseed. While it can be planted from stolons, due to the limited supply, it will be available in the sod form only initially. Sonoran™ Zoysia has an aggressive rhizome system and can be invasive when planted next to flower beds.

Palmetto® St. Augustine is a deep-rooted grass that has a dark emerald green color. Due to its deep root system, it can survive better in drought conditions that can other St. Augustine varieties. Palmetto® is one of the most shade tolerant varieties available and can grow well with as little as 3-4 hours of direct sunlight, compared to hybrid Bermudagrasses which require direct sunlight for at least half of the day.

Palmetto® can be mowed with a rotary mower and develops a strong deep root system if mowed at 2-2½-in. Mowing at 1½-in. is acceptable if more frequent mowings are practiced in order to avoid cutting off more than ⅕ of the leaf blade per mowing. Recommended fertilization and watering schedules are the same as for Sonoran™ Zoysia. Careful watering is particularly necessary for Palmetto® since it will pick up and retain sodium at significantly higher levels than will the hybrid Bermudagrasses. Deep waterings help to flush salts which can reach toxic levels with all St. Augustine varieties. Once harvested and on the pallet, Palmetto® cannot tolerate the hot summer heat as well as hybrid Bermudagrasses, and is therefore available only during the spring and early fall when the temperatures are below 100°F. It should not be over-seeded; however, it does have excellent cold weather color retention, and may stay an off-color green all winter in the more protected areas of Phoenix (unless Arizona experiences an unusually cold winter). Palmetto® is available in the sod form only.

C. C. Willis
Owner and General Manager, Western Sod

Proper Mowing Heights
(all values are in inches)

<table>
<thead>
<tr>
<th>Species</th>
<th>Mower Type</th>
<th>Cool Weather</th>
<th>Hot Weather or Shade</th>
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<tbody>
<tr>
<td>Common Bermuda</td>
<td>Power reel or rotary</td>
<td>½</td>
<td>2</td>
</tr>
<tr>
<td>Hybrid Bermuda:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘Midron’ (‘EZ Turf’)</td>
<td>Power reel or rotary</td>
<td>¾</td>
<td>1</td>
</tr>
<tr>
<td>‘Tifgreen,’ ‘Siesta’</td>
<td>Power reel</td>
<td>⅜-⅝</td>
<td>⅜-⅝</td>
</tr>
<tr>
<td>‘Tifway,’ ‘Santa Ana’</td>
<td>Preferred power reel</td>
<td>⅜</td>
<td>⅜-Ⅲ</td>
</tr>
<tr>
<td>Buffalograss</td>
<td>Rotary</td>
<td>1½</td>
<td>4</td>
</tr>
<tr>
<td>Fescue</td>
<td>Rotary</td>
<td>1½</td>
<td>3</td>
</tr>
<tr>
<td>Ryegrass (annual)</td>
<td>Power reel or rotary</td>
<td>2 to estab-lish, then 1-2.</td>
<td>2½ in a poly-stand, ⅔ or less to transi- tion to ber- muda.</td>
</tr>
<tr>
<td>Rye (perennial)</td>
<td>Power reel or rotary</td>
<td>2 to estab-lish, then ⅘-1½.</td>
<td>2½ in a poly- stand, ⅔ or less to transi- tion to ber- muda.</td>
</tr>
<tr>
<td>St. Augustine</td>
<td>Rotary</td>
<td>2-3</td>
<td>3</td>
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<tr>
<td>Zoysia grass</td>
<td>Reel</td>
<td>½-1</td>
<td>1-2</td>
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</table>

Table adapted from “Turf Tips by Western Sod - Mowing”
Turf Grass “Done Right”

Some gardeners and area plant experts are almost “anti-turf” in their attitude toward lawns and turf in the low desert growing regions. They want to concentrate their efforts and space to growing vegetables, flowers, herbs and other plants and do not feel that turf has a place in their scheme, or even any place in this climate. Actually though, a turf grass area that is properly designed, selected, prepared, planted, watered and maintained has a definite place in the low desert. In fact, it can directly benefit the property owner in numerous ways. These benefits of course include the use of the area for recreation and leisure activities. Additionally, researchers at the University of Arizona have shown repeatedly that turf grass “done right” can actually reduce overall energy and water needs in a household. This is very similar to the household energy benefits that we are all familiar with for properly chosen, planted and maintained trees.

The key to gaining these benefits from our lawn areas lies in this “done right” point. We must start with the correct design — and this does not mean random kidney bean-shaped grass areas in a home’s front yard. Place the turf area where it will be the most useful and provide the most benefit to the actual living space of the home, like the backyard where children can play safely and the cooling effects of the turf can be enjoyed the most.

Once you have chosen the most beneficial location, design and installation of an efficient irrigation system is the next step, followed by proper soil preparation. Good watering and well prepared soil will go a long way to keep your turf in the healthiest, most water efficient state possible for the longest term.

Now comes the absolutely crucial step — choosing the right grass to plant. Rushing through this or making a poor decision will negate all other efforts and keep the gardener always working harder, with no chance of success. Just as with many other plants, we do find non-adapted turf choices offered for sale in the low desert. Definitely a case of “Buyer Beware” or “Buyer Be Aware,” turf gardeners should not assume that all items offered for sale are meant to be planted here. Our extreme climate (freezing to 120°F range), as well as our soil and water quality drastically limits the turf species list that we should be choosing from.

This summer, Master Gardeners will be planting a set of turf plots behind the Maricopa County Extension Office, showing the limited species that are at all adapted to this region (plots will be planted with both sodded and seeded varieties for comparison). We will be able to observe these turf plots throughout the year, to educate Master Gardeners and the homeowner public.

The bottom line for low desert dwellers is Bermudagrass, sod or seed, but plant some type of Bermuda for the easiest, healthiest, most trouble-free lawn. Most of the other turf choices we will demonstrate will perform O.K. here, but maintenance will generally be higher and these other turf grasses are not as “forgiving” as Good Ole Bermuda. Many individual variety choices are available in this diverse genus, and all are adapted to our hot climate. Some of the Bermudas are available only in sod form for those wanting that “instant lawn,” while others produce seed that can be planted directly on the lawn site. How do you know that Bermudas will perform here the best? Several sod companies have very successful turf farms scattered throughout the low desert areas, and 99% of the world’s supply of Bermudagrass seed is produced in the desert farming areas of Arizona and California. We don’t find any successful sod or seed farmers producing Bluegrass or fescue in our region.

Once you are convinced (or resigned?) to planting Bermuda, the choices of color, texture, density, mowing needs, disease and pest resistance, etc. are numerous. Ask questions, check out some existing plantings or trials and learn from every experience.

Mike Hills
Master Gardener, Turfgrass Agronomist & Plant Breeder for Seed Research of Oregon, Inc.

Bermuda Lawns and Allergies

Here’s a beneficial suggestion from a turf grass “expert,” who is personally very allergic to Bermuda pollen and molds. You can easily reduce the amount of pollen that your non-hybrid (seeded variety) Bermuda lawn produces. Keep your Bermuda lawn mowed below 5-in., and maintained with good, healthy levels of water and fertilizer. Growing well and mowed correctly, the Bermuda plants will hardly produce any blooms or pollen. If allowed to grow too tall, and stressed by too little or too much water and fertilizer, the Bermuda lawn will bloom like mad and produce an overload of pollen (Stress = Pollen = Seeds). In order to stimulate more blooms and extra pollen for seed production, our Bermuda seed growers stress the fields.

Mike Hills
Alternatives to ‘Tif’ Grasses

When you drive through the neighborhoods in the Phoenix area and spot a really nice looking yard with beautiful grass, 9 times out of 10 the grass will be one of the hybrid Bermuda 'Tif' types of turf. Observe over a period of time and more than likely you will find the grass being mowed every 3-4 days, watered frequently, fertilized every 30 days, verticut at least once a year plus a lot of other tender loving care. The "hybrids" come from crossing "common" Bermudagrass with an African Bermudagrass resulting in a seed that will germinate, make seed heads but never make seeds itself (i.e. no seeds, no pollen). Since it is not practical for the homeowner to get into the grass-crossing business, the sterile hybrid forms of Bermudagrass must be established by sodding, plugging or sprinkling with stolons.

Look a little closer at some of the older hybrid lawns that are not so nice and you may see the round circle scourge of 'Tif,' the infamous pear scale for which man has yet to find an effective eradication method other than complete replacement of the soil from the infected areas. How does one acquire pear scale in a yard? Well, they are not transmitted by air and not moved around by birds or other animals. Most likely pear scale is introduced into the soil by something that is added such as mulches, manure, potting soil from purchased annuals/shrubs/trees, or even one or two may have come in with the original sod and multiplied from there.

Is there an alternative to the "hybrids" that will give the homeowner one of those lawns admired by all who pass by and not require sodding, a reel mower or be subject to pear scale damage? Note the phrase “pearl scale damage” and not “the absence of pearl scale.” In that pearl scale does at times co-exist with the non-hybrids even though the damage they cause may not be noticeable. Also, if you have allergy problems, remember the quote of our University of Arizona grass guru, Dr. David Kopec, “If you can buy it from seed it will make seed (and pollen).” Would you believe plain old vanilla "common" Bermuda can make a beautiful lawn if given some of the same kind of attention one would give a hybrid lawn such as frequent fertilizing, mowing low, keeping free of weeds, etc. In addition there are some relatively new turf kids on the block which are categorized as "improved turf-type Bermuda" seeded grasses. Characteristics of these new grasses (relative to common Bermuda) include finer leaf texture, narrower leaf width, shorter leaf length, increased density of leaves per cm. of stem, darker green in color and better durability. The new varieties of improved Bermuda-grasses are moving closer and closer in appearance to the hybrid "Tif.

‘Nu-Mex Sahara’ was the first of the improved types to developed and is a slight improvement over "common" Bermuda in the areas of color, turf density and shorter leaf length/width. More recently ‘Yuma’ has become available and it has a greater improvement in these areas plus it requires less water and has a low growth habit which moves it a little closer to the ‘Tif’ type grasses in appearance. ‘Yuma’ can be mowed as low as ¼-in. although to maintain this height will require mowing every 3 to 4 days and preferably with a reel mower for optimum appearance. ‘Sultan’ is another entry into the improved Bermuda-grasses claiming a top ranking entry into the National Turfgrass Evaluation Program Trials started in 1992. ‘Sydney’ is a new arrival and the data sheets claim it has increased density over ‘Yuma’ and texture much finer than ‘Nu-Mex Sahara.’ ‘Sydney,’ ‘Yuma’ and ‘Sultan’ are being offered as a blend designated as the ‘Bermuda Triangle’ which combines the best features of these 3 grass types. Other types include ‘Cheyenne,’ ‘Sun Devil,’ ‘Sonesta,’ ‘Mirage Panama,’ ‘Guymon’ and ‘Princess.’ ‘Princess’ is still under development.

The improved Bermuda types can be seeded for a new lawn or to improve an existing “common” Bermuda lawn. With a new lawn in our alkaline soils for every 1000 sq. ft. it is recommended to use 2-lbs. of the improved Bermuda seed, add up to 20-lbs. of sulfur, add a starter type fertilizer when planting and fertilize with 1-lb. of actual nitrogen per month during the growing season (Mar.-Oct.) after it is well established. To improve and existing “common” Bermuda lawn use ½- to 1-lb. of the improved Bermuda seed. When planting cover the seed by no more than ¼-in. and keep moist for 10 to 14 days which is the expected germination period. Plant when the soil temperature is consistently above 65°F. Mow the first time after about 3 weeks to allow time for the root system of the new grass to become established. Mowing height will be determined by the grass type. For example ‘Sahara’ should be mowed from ¼- to 1-in. in height where ‘Yuma’ some of the others can be mowed as low as ½-in.

I found it very difficult to find the seeds referenced in this article in the Phoenix area. In May of 1998, I could find very few nurseries that were carrying these grasses. (Continued on page 10)
Can't See Your Grass For The Trees?  
Or, The Mystery of the Dead Shaded Grass

As plant-attached people, we all have some personal experience with "a walk in the woods." As we walk through the woods, we notice a definite lack of... yes, that's right — grass. As a general rule, we do not expect to see grass growing under the trees in Nature — in fact we all know that you look for grass in open, sunny areas among the trees such as meadows. But, somehow when we gardeners move into the realm of our own yard, we forget what we already know and we expect to have lush, thick grass under our own trees. After all, we manage to manipulate most other plants to grow where and how we want them to grow. And, to add further strain to our lawn growing efforts, we insist on pruning the turf plants very short and leaving a much reduced leaf surface to harvest the limited sunlight that reaches past the tree canopies. Turf is a good choice for recreation and for cooling benefits on the home, but low desert residents have to be realistic about where we can grow it.

The turf grass species used around the world have entered mankind's turf world from wild and maintained pastures. This includes both the cool climate turf grass species (fescues, Bluegrasses, bentgrasses, ryegrasses, etc.) that originated in Europe and the warm climate species (Bermudagrasses, zoysias, bahias, St. Augustines, Buffalo-grasses, etc.) that originated in various hot or tropical regions of the world. In all cases, mowed and maintained turf grasses were originally chosen for their ability to withstand and thrive under the constant traffic and grazing pressure of our animal herds — the first lawn mowers. A pasture is a manmade duplication of the natural grasslands and prairies around the world — wide open spaces, with few shrubs or trees to compete with the grass plants for nutrients and water, and plenty of sunlight. A successful manmade turf grass area is generally the same duplication.

Plant breeders have made many improvements over the years to our turf grass choices through selection and breeding for desired traits such as color, texture, density, disease and insect resistance, reduced water needs, etc. However, shade tolerance is one area where very little progress has actually been made. These are after all plants that evolved over millions of years to fill an ecological niche in full sun conditions — turf grass breeders have only been working on this for a few hundred years and it will take longer to match Mother Nature's success.

A few turf grass species tend to be more tolerant of shade than others, but this does not mean that they are truly "shade loving" plants. Comparing the same plants in sun or shade, the plants with adequate light levels will always be healthier and more vigorous. Sadly for low desert gardeners, the turf species that are more tolerant of shaded conditions are not very tolerant of our temperature and pH extremes. In a few situations, we can manage to get some grass to hang on in heavy shade, but it will not be as healthy as the surrounding sunny areas, and will always be more susceptible to insect and disease pressures during the more stressful times of the year.

We actually need to concede defeat to Mother Nature, and convert our heavily shaded areas to flower and vegetable beds or plant these areas to shade loving ground covers. If you still insist on growing grass in those areas, there are a few cultural practices that can help improve your chances. Removing some trees to increase sunlight; pruning the tree crowns upward and thinning the canopies periodically to let in more light; mowing the shaded grass taller to allow more leaf surface; or planting a different turf species under the trees that is more shade tolerant. Over the long term, the first 3 choices are generally more successful. For the last option, we desert dwellers can plant zoysia grass or tall fescue and have some success in our shaded turf areas. However, these will need different levels and types of nutrients, water and mowing than the surrounding grass areas and the turf gardener will have to diligently monitor the shaded turf for insect and disease problems. I would recommend taking Mother Nature’s advice.

Mike Hills  
Master Gardener, Turfgrass Agronomist & Plant Breeder for Seed Research of Oregon, Inc.

Troublesome Turf (Continued from page 14)  
or environmental conditions are conducive for pests. A healthy, well maintained lawn, along with proper soil preparation and planning, is your lawn’s best protection against weeds, insects and diseases.

Sharon Dewey, Western Sod, Marketing & Client Service  
Korene Charnofsky Cohen