

A WORD OR TWO ABOUT GARDENING

Weeds – what’s in a name?

When Shakespeare had Juliet pose the above question it was of course with reference to the rose, which was then universally esteemed for its exquisite fragrance. There are certainly many today who might wish to emulate Shakespeare in his praise of the rose – as an aside one can only wonder what he would have made of today’s less fragrant but showier roses. The poetic endeavors of others however would likely be liberally spiked with invective. For them a rose by any other name would still constitute a major nuisance, meeting the oft stated definition of a weed: the wrong plant in the wrong place at the wrong time.

Rosa multiflora, a widely used rootstock for roses (though a poor choice for Florida) is listed as a noxious weed in at least ten southern and eastern states. Although of more ornamental value, both the McCartney rose (*Rosa bracteata*) and the Cherokee rose (*Rosa laevigata*) are regarded as highly invasive in parts of Texas and Alabama respectively. Contrast this with the comments of the noted late British rosarian, Graham Stuart Thomas, who described the McCartney rose as “aristocratic and altogether splendid”, with “many admirable qualities”. Compared to Texas the McCartney rose is far less aggressive in the cool British climate, and can be appreciated for its ornamental qualities. This illustrates an important point: it is not only what is grown but where it is growing that contributes to labeling a plant with the opprobrium of weed. Consider two frequently used Florida native plants, coccolum and satin leaf, much appreciated in local landscapes but noted as invasive in E. Africa and a number of Pacific islands.

Designating a plant as a weed also depends on the type of negative impact it exerts: for growers it is economic, for those managing natural areas it is ecological and for landscape managers it is aesthetic. It is possible to add a fourth negative impact: plants that pose a hazard to humans and domestic animals. For gardeners, all of the above can factor into which plants are regarded as ‘weeds’, but most often it is likely to be the effect on aesthetic appeal that rouses us to action. We may unwittingly select what seemed at the time a definite landscape asset, only to find the plant in question rapidly invading parts of the yard other than where it was originally planted (e.g., various clerodendrums and barlerias). More often though weeds just seem to arise from nowhere. This is usually the result of wind or animal/bird dispersed seeds, though we can ourselves inadvertently transport weeds to the yard. This can be via topsoil or container plants, or we can spread weed seeds throughout the yard on foot wear and dirty garden implements. Pulling up weeds can be counterproductive, spreading them further especially if they have gone to seed. Stem pieces inadvertently dropped during clean-up after weed removal can readily take root (e.g., day flower, wedelia or West Indian chickweed).

For the remainder of this article we will concentrate on that one feature of the landscape that is most often perceived as having a weed problem, namely the lawn. It is unrealistic to expect a garden lawn to be totally weed-free – if this is what you are aiming for better to install artificial turf. Be content with a lawn that is neat,

uniformly green and appears healthy (grass is not thinning out yellowing or turning brown). Turf grass that is well managed should be able to crowd out serious competition from weeds. This means paying attention to mowing, fertilizer use and watering. Neglect these aspects of maintenance and you provide an open invitation for weeds to become established as grass is more likely to become stressed, diseased and/or susceptible to pests. Grass must be mowed at regular intervals, so that no more than one third of the grass blade is removed at any one time. St. Augustine grass should be maintained at a minimum height of 2½" (dwarf varieties) to 3' (other varieties such as Floratam). Mowed shorter than this, the root system will not develop as fully (reduced drought tolerance) and food reserves will be less due to the decrease in grass blade surface area (reduced photosynthesis).

Fertilizer should be applied in early spring at a rate of 1 lb nitrogen per 1000 sq ft, of which 50% should be in a slow release form, and again in early fall. Additional applications of nitrogen will produce more luxuriant growth, but it can also increase the risk of turf damage from insect pests and disease. Unless your turf is severely infested with weeds, return grass clippings to the lawn as a means of increasing fertility – this is made easier with a mulching mower. Too little water, if it does not outright kill large areas of grass, stresses turf making it more susceptible to chinch bugs and diseases such as gray leaf spot. Excessive soil moisture will encourage disease. A useful indicator that your lawn requires water is when the grass blades start to curl along the midrib. More detailed information on the care of turf grass is available for homeowners from the Miami-Dade Extension Office

There are all too many weeds able to colonize incorrectly managed turf grass; the following discussion is restricted to some of those most frequently encountered by homeowners in Miami-Dade. Various weed grasses are found, of which 'wild' **Bermuda grass** (*Cynodon dactylon*) is one of those most commonly identified. Bermuda grass is a thin wiry grass which spreads by both surface stolons and scaly underground rhizomes. At each stolon joint (node where a stem arises) the old sheaths remain, their resemblance to dogs' teeth, giving rise to the scientific name *Cynodon* (from the Greek for dog and tooth). Once established, Bermuda grass is very difficult to control. The grass can take root from pieces of stolon as well as lengths of rhizome. It is therefore essential to remove both if you are attempting to pull up Bermuda grass by hand. Before re-sodding an area of turf heavily infested with Bermuda grass, spray with a non-selective herbicide (e.g., glyphosate) when the grass is actively growing (early spring). Wait for 7 -10 days and thoroughly rake the area to remove dead grass including stolons and underground rhizome. If you live in one of those few parts of Miami-Dade (e.g., NE) where there is several inches of top soil, spade it over to expose rhizomes so they can dry out before raking.

Other common grass weeds include at least three different types of **crab grass**, **small flower Alexander grass** (resembles crab grass), **sandburs** (annoying spiny seed heads become attached to clothing) and **goose grass**. It may be possible to dig out a few isolated clumping grasses such as goose grass. There are no homeowner herbicides available for effective control of weed grasses in locally grown turf. Atrazine provides some suppression of annual grasses (e.g., crab grasses) when used as a pre-emergent herbicide, however its use has been severely restricted.

Concentrated liquid atrazine is currently being withdrawn from residential use - a granular product for spot application to control broadleaf weeds is available. There is one natural product (active ingredient cinnamon bark) that claims to control crab grass in St. Augustine turf, but there are only anecdotal reports as to its' efficacy. If grass invades ornamental plant beds, herbicides, e.g. those containing fluazifop, may be applicable, though you need to first read the product label before applying.

This admonition to read the label bears repeating for all herbicides: you must read all labels and inserts carefully and familiarize yourself as to how, when and on what the product can be applied. For instance many herbicides cannot be used on St. Augustine grass. Even if says for use on St Augustine read the label again since it may state elsewhere, not for use on Floratam, or do not use on improved varieties of St Augustine (that again would include Floratam) or it may list only one or two varieties for which it is safe, such as Raleigh, which are not used in south Florida. Unless you know for certain what type of St Augustine grass was used for your lawn, it is best to assume it is Floratam, especially if it was laid after the early 1980's. Herbicides applied when it is too hot (usually above 85 F) will stress turf, and can exacerbate existing disease problems (atrazine and gray leaf spot on St. Augustine grass). Some herbicides, such as atrazine and dicamba, remain active in the soil and can harm trees and shrubs if applied within the root zone. Careless use of herbicides, including "weed 'n feed" type products (which contain atrazine) can damage your landscape, both trees and shrubs as well as turf grass.

Sedges, often confused with grasses, include several troublesome weeds that can invade turf grass. Of these the erroneously named **purple nutgrass (*Cyperus rotundus*)** will be all too familiar to many homeowners – it enjoys the distinction of ranking as the world's worst weed. Purple nutgrass is most easily identified by carefully pulling the entire plant out of the ground – stem, root system and a chain of small (¼") hard brown tubers attached to a wiry rhizome. Rhizomes that come to the soil surface develop basal bulbs (corms) from which further stems sprout. As well as purple nutgrass (color refers to seed head) there is also yellow nutgrass (seed head pale yellow to light brown) which differs in that tubers do not form chains, but are produced singly at the end of each rhizome. Purple nutgrass sets very few viable seeds. The problem derives from the large number of tubers produced and their ability to remain dormant in the soil (if it does not completely dry out) for up to 5 years. Left undisturbed a single plant will rapidly cover an area up to 10' in diameter as new stems sprout directly from the rhizome (basal bulbs), eventually developing a network of rhizomes and attached tubers. Nutgrass thrives given full sun and moist soil. It frequently arises in areas that are over watered or have inherently poor drainage. Once established however nutgrass can survive periods of dry weather (tubers will sprout once moisture is available) and is regarded as a perennial weed. It will not grow where there is shade – if correctly maintained, turf grass should prove sufficiently dense to shade out nutgrass.

To control nutgrass in small areas, hand removal is feasible but requires extreme diligence. You must remove as many tubers as possible, followed by all subsequent new plants before they are able to produce new tubers (stems with fewer than 5 leaves). This means constant weeding, especially during the summer rainy season.

Other sedges invade local turf grass including **green kyllinga**. This forms a dense mat rather than the more isolated clumps seen with nutgrass. It spreads rapidly by means of a somewhat fleshy, white rhizome conspicuously flushed red to purplish red. Unlike nutgrasses, green kyllinga does not form tubers, but it does produce copious amounts of viable seed. Where sedges become a problem, this is a good indication that the soil is too moist. You may need to adjust your irrigation schedule or consider possible drainage problems.

There are herbicides available to control sedges in turf grass, but first be sure that you are dealing with sedge and not a weed grass. This can be done by comparing stems: those of sedges are solid and three sided in contrast to the hollow, jointed round stems of true grasses. For control of sedges two herbicides are available for use in St Augustine lawns, imazaquin (more readily available for homeowners and gives some limited control of several broadleaf weeds, crab grass and sandbur) and halosulfuron. More than one application will be necessary, especially for nutgrass control in order to deal with any dormant tubers that have become detached from the above ground plant. Allow several weeks to ensure maximum sprouting of tubers before treating further.

Most homeowners probably are more familiar with broadleaf weeds (dicotyledons) invading their lawn than they are grasses and sedges (monocotyledons). **Dollarweed (*Hydrocotyle* spp.)** is the most frequently reported broadleaf weed, though it is probably sometimes confused with dichondra. Dollarweed has orbicular (almost circular), peltate leaves (stem is not attached to leaf margin but to the center like an umbrella), is rhizomatous and occasionally forms tubers. ***Dichondra*** has reniform (kidney shaped) to orbicular leaves with the stem attached to the margin, no rhizome but creeping stems that root at the node. The appearance of dollarweed in turf grass is, like sedges a sure sign of over watering or poor drainage. **Matchweed (*Phyla nodiflora*)** is a creeping perennial with toothed leaves and long-stemmed small flowers (like a match) that can rapidly spread in over watered turf. It is sometimes seen listed as a native groundcover but is not very attractive and readily grows out of bounds.

Where grass is thinning because of too much shade, expect **Cuban wood sorrel** (long stems growing from clusters of small white bulbs with large ternate leaves). This is one weed that is quite pretty when flowering (an umbel like inflorescence of pinkish purple flowers) but beware, this can become a major problem in shady, moist areas. **Bushy buttonweed (*Spermacoce remota*)** is also common in shaded thinning grass. It has small veiny, elliptic to oval leaves and tiny white flowers clustered around the upper nodes. Turf with bare open patches in full sun is just as susceptible to many weeds including various **spurges** (milky white sap), **southern sida** (tough rootstock, toothed leaves and small yellow hibiscus like flowers) and **Mexican prickle poppy** (spiny leaves, bright yellow poppy-like flowers).

We may first become aware of some weeds only after going indoors and finding their seeds stuck fast to clothing. Sandburs have already been mentioned in this connection, but there are also many broadleaf weeds of which common beggar ticks and creeping beggar weed are two of the most familiar. **Common beggar ticks (*Bidens alba* var. *radiata*)** is a highly invasive, erect to decumbent short-lived

perennial that can root at the nodes. The leaves are compound (3-9 toothed leaflets) and the flowers daisy-like with white rays (petal like structures). Spanish needles (*B. pilosa*) is similar but the flowers have greatly reduced rays. This is also weedy but is rarely found in Florida. The name Bidens is from the latin for two teeth, referring to the two barbed structures on the fruit (an achene) that cause it to attach to animal fur and human clothing. **Creeping beggarweed (*Desmodium incanum*)** as seen growing in lawns is a stoloniferous perennial plant that grows from a deep tap root. The leaves consist of three more or less elliptic leaflets; the small purplish flowers are followed by a small flat segmented pod. The segments easily break off and possess small hooked hairs on their lower surface making them extremely difficult to remove from clothing.

Finally, at least for now, a weed that is common in Miami-Dade turf but is of more serious concern to local horse owners. **Creeping indigo (*Indigofera spicata*)** like *D. incanum* is a deep-rooted perennial having spreading hairy stems and pinnate leaves consisting of 5 - 11 small rounded leaflets. It becomes more conspicuous in lawn grass with the appearance of small dense pink flower spikes, quickly followed by many close packed, 1" needle like linear pods. In pastures, it is not the lack of visual appeal that causes creeping indigo to be regarded as a noxious weed but the fact that it is highly toxic to horses, and can be fatal. Horse owners should be especially aware in late summer/early fall when seed pods are being produced. Contact the Miami-Dade Extension Office for further information.

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