

Native grasses for low maintenance rough

Korapat Jayaphorn

The Sustainable Turfgrass Management in Asia 2014 conference

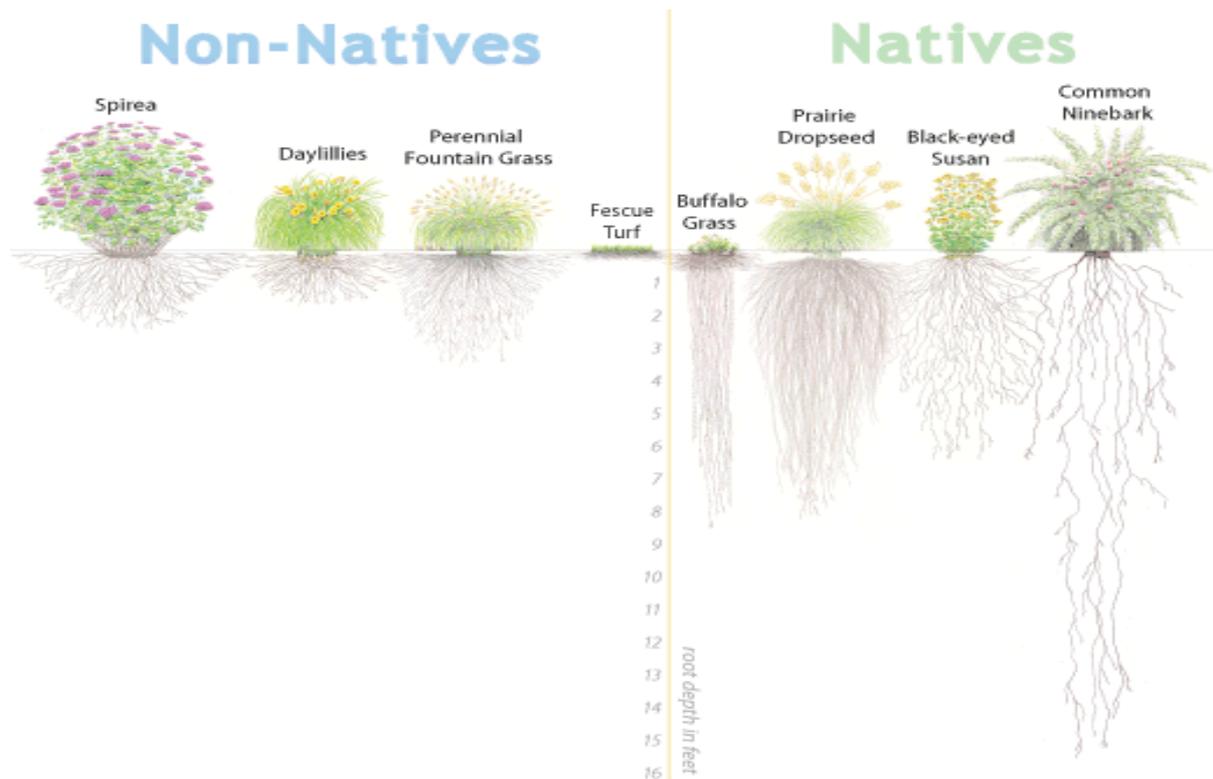
10 March 2014

Native grasses can be defined as a plant belong to its place. This plants often been disregarded, Now this idea is changing. The native grasses can be used in many places of golf course such as used in the long rough, in the carry zone, for fairway delineation and as features in landscaping around bunkers.

Why native grasses?

As most maintenance is expected on in-play areas, using the native grasses in the other areas or rough will help your maintenances more simple. Because the natives grass need less maintenance (Lacobelli, 2005) as require minimal irrigation, mowing, and chemical treatments, native landscaping is presumed to offer substantial savings and environmental benefits compared with conventional landscape designs. Native warm-season grasses have a number of physical characteristics that make them attractive to land managers. Most native grass species spend their first year after planting developing a strong root system that will eventually extend 5 to 15 feet into the soil. Although this results in a slower payoff above ground, the deep root system of native grasses is beneficial for a number of reasons. Their deep roots reach moisture, nutrients, and minerals far below the topsoil, so that native grasses can flourish on marginal and dry soils. The large root mass of native grasses contributes to an increase in soil fertility. Approximately one-third of the root system of each plant is replaced

each year. As these roots decompose, vital nutrients are returned to the soil.



Compared root system of native plant and non-native

What kind of grass can be used?

Not all of the native grasses are good enough to use in rough. Among the factors that must be considered when selecting which native grasses to use are (Weston, 1990)

- whether the site is tree covered or open ground
- the particular soil type you are working with
- whether the site is normally wet or dry
- whether the site is typically in sunlight or shade, and the direction of its exposure.

If unmowed rough areas at golf course are playable. The grasses should have the following features

- The grasses growth must not too thick golfers can locate and play errant shots.
- The leaves must be smooth not itch when contact.
- The grass inflorescences must not stick to cloths or itchy when contact

My research

I studies to evaluate suitable maintenance practices and phenology of native grass, Smutgrass (*Sporobolus indicus*), which used in unmowed rough areas at Siam country club, waterside. The objectives of the studies is to evaluate seed germination and identify phenological phases of Smutgrass , determine effects of cultivation practice on growth of Smutgrass and determine effects of drought on growth and ornamental characteristics of Smutgrass. There are some information of my research that I would like to share.

Smutgrass is a perennial grass occurs as a weed in many different areas (Davy *et.al*, 2012). The seed head is characteristically a spike-like panicle and can range from 25–80 cm long, with side branches 3–8 cm long and tightly packed along the primary axis. There may be significant variations in spike shape within populations as well as between populations.



Mature



Seedling Smutgrass

The grass is taking a minimum of three months to mature. However the plants may take years to mature if unfavourable conditions exist. Can propagate by dividing clumps and seeding. Seed production is very high (60,000 seeds/m²/year) but has germination percentage only 7%. All seeds fall within three meters of the parent plant. Soil must be moist for at least 4 days for seed germination during the dry season. The grass has high ability of drought tolerance and can survive without water for at least 3 months.

As compare the planting method between dividing clumps and seeding, dividing clumps is taking minimum 3 weeks to mature while seeding taking at least 12 weeks. Appropriate spacing is 20 cm. Mowing after planted 1 month did not Stimulate tillering. When live in drought condition the grass will show the ornamental characteristics such as spiral leaf, leaves and inflorescences turn to brown or yellow.

However the grass can become a weed in the other area of golf course as high seed production. The area where planting Smutgrass should be at least 5 meters far

from playing area. The ground near the grass should have a cover plant which dense ground cover for example Bahiagrass. As slow establishment when grown by seeds weed control can do by hand weeding.



Compared planting method after 1 month between

Sources

Davy, J., L. Forero, Nader G., Ditomasa J. and G. Kyser. 2012. Managing Smutgrass in Irrigated Pastures.

University of California.

Mid-America Regional Council. 2012. Available at :<http://marc.org/environment/>

[Water/know_your_roots.htm](#), 23 November 2013.

Weston J. 1990. Using Native Plants in Golf Course Landscape. Forest Hills Country Club, St. Louis, Missouri.