

Indiana Drought Fact Sheet for: Warm Season Grasses

2012 Drought Overview

As drought conditions worsen in Indiana, NRCS has developed a plan to communicate information and resources to keep you informed about programs and services that can benefit you.

As of today, Indiana is the worst hit of the major corn and soybean states. Reports from every corner of the state indicate moderate to severe conditions comparable to the 1988 drought. Combined with days of heat stress, crops are quickly showing signs of failure. Areas in the Northeast and Southwest are the hardest hit and are considered severe. A number of areas in the state have received spotty precipitation (mainly in the Northwest and Southeast), but not enough to significantly improve growing conditions. Some of these areas where rain has fallen have also received high wind and hail damage.

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Warm Season Grass

Just like the name describes, warm season grasses prefer warmer soils and warmer conditions than cool season forages. What is normally considered good corn growing weather, hot and humid, makes warm season grasses thrive. While cool season forages break dormancy when the soil temperature is just above freezing, warm season forages prefer soil temperatures in the 50's to break dormancy.

Landowner Benefits

Warm season grasses make most of their growth during the hottest growing months when most cool-season grasses either taper off or go completely dormant. Warm season grasses have very extensive and deep root systems, and are very efficient with water and nutrients, making them extremely drought tolerant. They will continue to grow and be green when other forages have turned brown. Having even one small field of a warm season grass is a good insurance policy or just part of a well thought out contingency plan.

Wildlife Benefits

Warm season grasses, when properly managed, will also provide many long-term benefits to wildlife. These plantings are especially important for nesting, escape, and winter cover primarily for upland game bird species, especially Bobwhite quail and Ring-necked pheasants. Warm season grasses are also an essential habitat component for a variety of grassland songbirds and benefit many other wildlife species.

Most warm season grasses are bunch grasses rather than sod grasses. The clumps of grass are ideal sites for nests, as the spaces among clumps allow small ground-dwelling wildlife to move freely yet still provide good overhead cover. Warm season grasses do not lodge (bend over) easily. Thus, they provide ideal nesting and winter cover for many ground-nesting birds.

While they provide excellent cover, warm season grasses provide little food for wildlife. However, adding native forbs (i.e. wild flowers) will enhance the food value of any planting. Often these forbs have showy flowers that bloom throughout the spring, summer, or fall.



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What to Plant

Warm season grasses don't mature at the same time. They vary from species and variety from early summer to late summer.

The earliest maturing is the rhizomatous perennial Switchgrass which is usually three to five feet tall. Switchgrass, when grown as a monoculture and grazed correctly, can form somewhat of a sod, and best kept in a vegetative stage to maintain quality.

Most warm season grasses grow in bunches with a small amount of space between plants. This is one of their key attributes for being good quail habitat. This is not the case with a stand of Switchgrass. Switchgrass is the most tolerant to "closer" grazing of all the warm season grasses, but even it prefers to maintain at least six inches of base. Switchgrass is often planted for use as an early hay crop with the regrowth going for pasture and the easiest to plant because of the small smooth seed.

Big bluestem is usually the next to mature along with little bluestem. Big bluestem is a very robust perennial bunchgrass often reaching six feet tall. It generally is the most palatable warm season grass, even as it reaches maturity. It is also the most drought tolerant species with extremely deep roots. It does require a specialized drill to plant because of its light fuzzy seed.

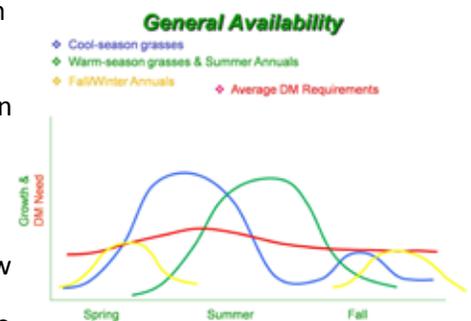
The latest maturing warm season grass is Indiangrass, which is another fairly robust perennial, can also grow to five or six feet tall. It can provide good forage during the late summer months but declines some in quality as it matures. The shorter species of little bluestem and sideoats grama, along with warm season legumes and forbs make good filler and diversity when mixed with the big bluestem and or Indiangrass.

Switchgrass is best managed by itself. Native and local ecotypes are preferred.

Making it Work for Your Farm

The efficiency of the grazing system can be improved with the addition of up to 20-30 percent of the pasture base planted to warm season grasses. Since these warm season forages won't initiate growth as early in the year, they will not compete for field time during the corn and soybean planting season. If cut for hay, they are normally ready after most tall cool season forages and in better drying condition.

Cool season forages can be grazed early in the season, then livestock can be moved to warm season forages during midsummer. This provides rest for the cool season forages during that time period. This rest improves their vigor and helps maintain adequate reserves which will provide an increased supply of forage for late-summer, fall and early winter grazing. To allow sufficient rest, you should have enough warm season forages to cover at least a 30 day window or ideally 45 days. Most producers that have a small "patch" of warm season grasses wish they had more, especially on droughty years. This summer of 2012 was full of forage challenges, but one of the things that provided a green spot and kept right on growing was the warm season grasses. If you look at the graphic, the red line is average dry matter requirements for a spring calving herd. Looking at the blue line which indicates average cool season grass growth over the season, it grossly slumps off during the summer. The warm season grasses cover this time period very well. Mixed with some winter annuals and stockpiled forage, the grazing season can be extended quite easily most years.



Managing the Practice

Warm season grasses can take up to three years or more to establish depending on the site and management. These taller warm season grasses are best harvested or grazed when they are about 18 to 20 inches, or more, in height or boot stage. Though more difficult to do, they should never be grazed or hayed closer than five inches. Warm season grasses store a large amount of their regrowth energy in the lower five to eight inches and will rebound and persist better if not overgrazed or cut below these heights.

