

What Are “Native Warm-season Grasses” and which Ones Should I Use on My Farm?

Dr. Patrick Keyser, Professor and Director, Center for Native Grasslands Management

In recent years, increased attention has been paid to a group of grasses referred to as “native warm-season grasses” or NWSG. But what exactly are these grasses? Simply put, they are grasses that grow naturally in the eastern two-thirds of the US – they were not introduced from other parts of the world. These tall, bunch grasses grow during summer, hence the label, “warm-season.” While there are many species of such grasses, five of them have excellent potential as forages and are described briefly below.

Switchgrass, because of its role in bioenergy, may be the most familiar of these grasses. Switchgrass is very productive, is very drought tolerant, and can grow on particularly wet sites. There are two basic types of switchgrass – upland and lowland, which is considerably taller. In terms of forage quality, switchgrass can become stemmy, especially the lowland varieties, but it is readily grazed by cattle and produces summer gains of 1.5 – 2.0 lbs/day on steers.

Big bluestem was the dominant species of the once vast tall grass prairies. It is still common on native range and is probably the most preferred forage by cattle among the natives. It does not produce quite as much tonnage as switchgrass, but is less stemmy and produces better gains (2.0 – 2.6 lbs/day). Big bluestem can grow on a wide variety of sites, but does not do as well on wet sites as switchgrass.

Little bluestem is a smaller relative of big bluestem. Of the five species mentioned here, it produces the least amount of forage, but has the advantage of doing well on particularly poor sites and, compared to other NWSG, is easily established. It is often planted in mixtures with big bluestem. Despite its similarity to broomsedge, it is a very good forage that cattle readily consume.

Indiangrass commonly grows with both big and little bluestem on native rangeland. Compared to big bluestem, it is somewhat more productive, is slightly stemmier, and is less tolerant of wet sites. It can grow on a wide variety of soils, being intermediate between big and little bluestem in terms of its tolerance of poor soils. It is an excellent forage, being only slightly less preferred than big bluestem. Like little bluestem, it is one of the easier NWSG to establish.

Eastern gamagrass is the least similar to the other NWSG described above. In terms of tonnage, it is comparable to switchgrass. In terms of site requirements, it can grow on sites as wet as switchgrass, but may not do as well on thinner, poorer soils as the other NWSG. Also, unlike the other NWSG, it is very responsive to nitrogen. Although readily consumed by cattle, it generally does not have the high gains of the other species. Nevertheless, it is highly drought tolerant, can carry very high stocking, and sustains production in late summer better than the others. It is also the earliest to grow in the spring.

Regardless of NWSG you choose, native grasses can all provide a low-input summer forage option that will substantially improve the drought-tolerance of your overall forage program.