Warm Season, Native Ornamental Grasses for the Home Garden

Celebrate summer! Announce the midst of your summer garden with the lively elegance of warm-season ornamental grasses.

Figure 1. In summer, big bluestem (Andropogon gerardii) - striking dangling display of yellow anthers along its’ flowering inflorescence by Thomas J Mrazik, Penn State Master Gardener.

Providing dramatic bursts of textured foliage, habits of every kind and distinctively intricate flowering, warm-season ornamental grasses create a feeling of being in nature. This is just the start of their ornamental prominence. Their bountiful displays are ever changing, lasting well into fall and winter.

Native ornamental grasses provide important wildlife habitat, shelter and food from both seeds and the insects they attract. Warm-season grasses, with their bunchy, stiff-stemmed upright growth, provide structure for nest building, protection from weather and predators, and ground openings for wildlife foraging. These grasses also support a variety of insect communities, including larval caterpillars.

Features of Ornamental Grasses in the Poaceae Family

Members of the Poaceae are considered to be true grasses. In the field, Poaceae grasses have a cylindrical hollow stem called a culm. Solid swollen nodes or joints appear along the culm. Other "grass-like" ornamental plants that are not true grasses, such as sedges that belong to the genus *Carex* in Cyperaceae, have triangular-shaped solid culms with three edges and without joint nodes. Rushes in Juncaceae have a rounded, solid culm without joints.

Grass plants grow in two main ways, either clumping or running. The vast majority of warm-season grasses are clumping, also known as a bunch grass. These grasses have discrete crowns, tending to stay mostly around their planting area. Fewer warm-season grasses grow via "runners," which spread by rhizomes or stolons, usually growing beyond the area where they were planted. In either case, new seasonal growth of grasses emerge with shoots or tillers.
Warm-season ornamental grasses are perennial plants often referred to as C4 plants. Cool-season grasses, on the other hand, are known as C3 plants. The number refers to the quantity of carbon atoms initially produced during the process of photosynthesis which is key to how grasses are able to adapt to different environmental conditions. One consequence of their unique photosynthetic process is that warm-season grasses are more often drought tolerant due to high light and temperatures. Thus, they tend to adapt well to hot, dry weather, usually staying “green” in July and August.

Warm-season grasses emerge in late spring to early summer, with flowering extending from mid to late summer and even into early fall. Their ornamental features mature well into fall and even winter. In contrast, cool-season grasses emerge in late March through April and mostly flower by early summer.
Ornamental grasses have distinctive flowers but with no petals or sepals. A floret is the basic flower unit of an ornamental grass. It is comprised of bracts or small scales named lemma and palea. A fertile floret has an enclosed reproductive stamen, which includes pollen, an anther, and a pistil. An assemblage of more than one floret is a spikelet, with its outer bracts named glumes. Bracts might be tipped with a long, hairy-like, bristly extension called an awn. Grasses do not have nectar to attract pollinators. They are wind-pollinated, developing seeds or grains later in the season. Many of these grasses are host plants for various larval caterpillars.

Florets or spikelets are held atop the main stem or culm. The culm has no branches but is sheathed with leaf blades that extend outward, forming the plant’s foliage. Typically, the foliage habit of these attractive grasses is either tufted, mounded, or upright.

Ornamental grass flowers have several patterns of inflorescence. Common types are either spike, raceme, or panicle, each varying to the extent of how the grass flower branches off the culm. For example, a panicle shows the most open and longest branching inflorescence, while a raceme is shorter, and a spike typically adheres directly to its stem.
Benefits of Warm Season, Native Ornamental Grasses

The warm-season ornamental grasses listed in Tables 1 and 2 are often found in public gardens, natural landscapes, and home gardens. Table 1 lists grasses of tall mature height, while Table 2 lists those of medium-low mature height. The tables provide highlights of each grass’s ornamental features and growing considerations. Note that ornamental features vary depending on the plant’s maturity and growing conditions. Cultivars of warm-season grasses also vary in features from those of the straight species. An example includes some of the common cultivars of *Panicum virgatum*, such as 'Shenandoah' noted for its burgundy-red color foliage; 'Heavy Metal' for its metallic blue-green color foliage; 'Northwind' for its olive blue-green color foliage and compact, vertical form; and 'Cloud Nine' for its taller height, up to 7 feet.
Warm Season, Native Ornamental Grasses for the Home Garden

Each warm-season ornamental grass has its own distinct ornamental beauty comprised of its foliage habit, color, culm, flowers, and type of inflorescence, and then, later in the season, how those ornamental features mature and seeds develop. Aesthetics are enhanced by planting multiples of a grass, such as three or more in a clump, band, or drift. Such a wide variety of distinctive ornamental features offers the home gardener many design options and ways to pursue new styles, especially those that are naturalistic.
Benefits of warm-season ornamental grasses in the home garden include:

- bursts of foliage by early summer
- ornate flowering from mid-late summer, even into early fall
- maturing forms and colors, lasting well into fall and even winter
- companion intermingling with petal plants and foliage
- thoughtful sequencing with cool-season ornamental grasses
- centerpiece of naturalistic, meadow-style gardens and landscapes

According to the USDA, these warm-season grasses are native to the continental United States, including Pennsylvania. The one exception is Bouteloua gracilis. Although it is not native to Pennsylvania, it is well suited for Pennsylvania home gardens based on its USDA hardiness zones, growing considerations, and current use in public and home gardens.
<table>
<thead>
<tr>
<th>Grass (common name)</th>
<th>Ornamental Feature Highlights (may vary by plant maturity and growing conditions)</th>
<th>Growing Considerations</th>
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</thead>
<tbody>
<tr>
<td>Andropogon gerardii, (big bluestem)</td>
<td><strong>Flower:</strong> Atop a long culm, raceme of 2-6 narrow spikelets, most spreading outward, forming a 3-parted V-shape, resembling a turkey's feet. Spikelets are dull grayish green to purplish red. Striking anthers in yellow to dull red colors. <strong>Foliage:</strong> Large basal dense tuft of outward arching long (1.5-2 feet) flattened leaves; lower third of culm. Leaf sheaths and blades emerge dull gray-green to glaucous blue. Matures to red-tinged green and, later, to reddish bronze with lavender tones.</td>
<td>Full sun to part shade, Clump growing perennial, USDA hardiness zones 4-9, Cultivars may vary in features</td>
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<td>Panicum virgatum, (switchgrass)</td>
<td><strong>Flower:</strong> Airy, long (7-20 inches) pyramidal panicle of spikelets atop erect, sturdy culms. In bloom, spikelets are light green to reddish purple. Colorful anthers. Mature spikelets turn light tan, persisting as seed plumes. <strong>Foliage:</strong> Leafy culms, with ascending or floppy long blades (up to 2 feet), form a stiff columnar habit. Panicum species leaves are usually medium green, sometimes light blue; maturing to yellow. Foliage colors differ by cultivar.</td>
<td>Full sun to part shade, Clump growing perennial, USDA hardiness zone 4-9, Cultivars may vary in features</td>
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<tr>
<td>Schizachyrium scoparium, (little bluestem)</td>
<td><strong>Flower:</strong> Raceme of paired spikelets (1-3 inches long) on a densely hair-covered central stalk (i.e. rachis); spikelets typically purplish in color. Long awns are bent and twisted. Anthers are brown to reddish brown, and stigmas are pale purple. Matures to a feathery, silvery-white seed head. <strong>Foliage:</strong> Upright, slender leaves (up to 10-12” long) along a tufted lower half of an erect culm (blue to purple in color). Blades emerge blue-green, then blue, purplish. A kaleidoscope of maturing hues - culms and foliage turn wine-red, reddish-gold, and/or copper.</td>
<td>Full sun, Clump growing perennial, USDA hardiness zones 3-9, Cultivars may vary in features</td>
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<tr>
<td>Sorghastrum nutans 'Thinman', (Indian grass)</td>
<td><strong>Flower:</strong> Narrow, lance-shaped panicle (up to 1 foot) of spikelets on wiry branches - golden brown / bronze to chestnut in color. Spikelets have showy yellow stamens and feathery white stigmas, some long bent awns. Dense hair tufts cover panicle branches. <strong>Foliage:</strong> Large, dense basal tuft of erect to spreading, often arching, foliage along the lower half of a stiff, vertical culm. Light-medium blue to blue-green colored blades are long (up to 2 feet), flat and wide; matures to orange-yellow-purple hues.</td>
<td>Full to part sun, Clump growing perennial, USDA hardiness zones 4-9, Cultivars may vary in features</td>
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Table 1. Warm-season, Native Ornamental Grasses (Poaceae) for the Home Garden—Tall Mature Height (up to 4-7)
<table>
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<th>Grass (common name)</th>
<th>Ornamental Feature Highlights (may vary by plant maturity and growing conditions)</th>
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<td><strong>Bouteloua curtipendula</strong>, (sideoats grama)</td>
<td><strong>Flower:</strong> A striking raceme of many (e.g. 25-50) pendulous oat-like spikes, hanging from sides of an erect, arching culm. A spike consists of 3-7 spikelets with awns. In bloom, spikes are pale green, greenish red, or red, maturing to tan. Anthers are yellow, orange-red to purple. <strong>Foliage:</strong> Basal leaf blades are narrow and 8-12” long, coarsely textured; light green to blue-green in color. Mature foliage turns golden brown, to orange or red hues.</td>
<td>Full sun to part shade, Clump growing perennial, USDA hardiness zones 4-9</td>
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<td><strong>Bouteloua gracilis</strong> 'Blonde Ambition,' (blue grama)</td>
<td><strong>Flower:</strong> Unique slightly curved chartreuse spikelets atop upright long arching culms. Yellow anthers. Spikelets hang from only one side of the culm in a horizontal or ascending position: resembling a human eyebrow. Mature seed heads turn blond. Used for dried flower arrangements. <strong>Foliage:</strong> Dense basal tuft of narrow blue-gray leaf blades (3-6 inches long). Mature foliage turns golden brown,</td>
<td>Full sun, Clump growing perennial, USDA hardiness zone 4-9</td>
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<tr>
<td><strong>Muhlenbergia capillaris</strong> (Hairawn muhly)</td>
<td><strong>Flower:</strong> Airy, gauzy, loose panicle (to 12” long) of pink to pinkish-red florets with long awns on long thin culms. Forms “cotton candy-like” cloud. Late season bloom. Matures to small, oblong tan or brown seeds. <strong>Foliage:</strong> Handsome dense basal clump of shiny, wiry, long, dark green leaves and culms; maturing to tan / copper.</td>
<td>Full sun to part shade, Clump growing perennial, USDA hardiness zones 5-9</td>
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<tr>
<td><strong>Sporobolus heterolepis</strong>, (prairie dropseed)</td>
<td><strong>Flower:</strong> Airy, spreading pyramidal panicle on erect long, slender culms. Erect small spikelets vary in colors - olive green, golden yellow, and/or purplish. reddish anthers. Tiny seeds drop to the ground from hulls. <strong>Foliage:</strong> Dense, tuft of fine, hair-like, green leaves (up to 20” long), forming a distinctive wide arching mound. Mature foliage turns golden-orange, to light bronze.</td>
<td>Full sun, Clump growing perennial, USDA hardiness zone 3-9</td>
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<tr>
<td><strong>Eragrostis spectabilis</strong>, (purple love)</td>
<td><strong>Flower:</strong> Wispy, open, long, and wide panicle of soft to bright reddish-purple spikelets. Tufts of hair along panicle branches. Forms an attractive airy haze, covering the basal foliage. Late season bloom. Mature spikelets turn brown / tan. Used for dried flower arrangements. <strong>Foliage:</strong> Coarsely textured basal clump of medium green foliage. Leaf blades are 8 to 18 inches long, flat, and taper to fine point. Mature foliage turns beige / copper, then light tan.</td>
<td>Full sun, Prefers dry soil, Rhizomatous clump growing perennial, USDA hardiness zone 5-9</td>
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Table 2. Warm-season, Native Ornamental Grasses (Poaceae) for the Home Garden—Medium to Low Mature Height (up to 2-3 feet) based on Foliage, Culm, and Flower Inflorescence

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