

Big Bluestem Spikelet (*Andropogon gerardii*)

Andropogon gerardii known as big bluestem is a warm-season grass with purplish racemes. This grass is a major component of tallgrass prairies. It is perennial, meaning that it continues to live through all seasons, but grows best in warmer climates. Big bluestem is most abundant in low meadows, prairies, and grasslands in the central and eastern regions of the United States. The roots can grow anywhere from 6-10 feet deep, with the main concentration being around 1-2 feet deep, with the plant itself growing to a height of 3-10 feet. Blooming in the summer and seeding in the fall, the inflorescence (group of flowers), consists of mostly 3 (but can range from 2-6) spiky racemes, or stalks lined with spikelets. The spikelet is the basic unit of a grass inflorescence that contains florets (small flowers covered with bracts).



Photo credit: Western New Mexico University
Department of Natural Sciences

Growing dense and tall, big bluestem is essential for grassland restoration and prairie gardens. Big bluestem serves as a host plant for several species of butterfly larvae and as livestock feed, being relatively high in protein. A fun fact is that Big Bluestem is the state grass of Missouri.

Careful observation of the spikelet under a microscope combined with reference images was used to get an accurate trace of the spikelet. This 2D trace was taken into Fusion 360, a popular Computer Assisted Design (CAD) program. Using this sketch as a reference, the spikelet was made by extruding this sketch and sculpting it to accurately represent the actual spikelet.



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