

Pennisetum glaucum (L.) R. Br. (*Poaceae*)

SPIKELET

Multiple floret spikelet, the upper floret fertile and the lower floret sterile or staminate. Clusters of two or more spikelets subtended by two whorles of bristles forming a fascicle. At maturity the fascicles disarticulate as a unit.

General shape: obovate

Normal size: 3 – 7 mm

Color: grey to light brown

Texture: fascicle with numerous persistent bristles

Distinguishing features: outer bristles 0.5 – 6 mm; inner bristles 4 – 6 mm; rachis densely hairy; lower glume absent or to 1.5 mm long, upper glume 0.5 – 3.5 mm long; lower (sterile) lemma 1.5 – 6 mm long, margins ciliate; lower palea vestigial or fully developed, margins ciliate

FERTILE FLORET

General shape: obovate

Normal size: lemma 4.3 – 7 mm long, palea 3.4 – 3.9 mm long

Color: light brown

Texture: firm, shiny, margins ciliate

Distinguishing features: caryopses +/- protruding from the tip of the fascicle; milled samples usually have all outer structures removed

CARYOPSIS

General shape: obovate; protruding from the lemma and palea at maturity

Normal size : 2.0 – 5.5 mm long, 1.6 – 3.2 mm wide

Color : grey to light brown

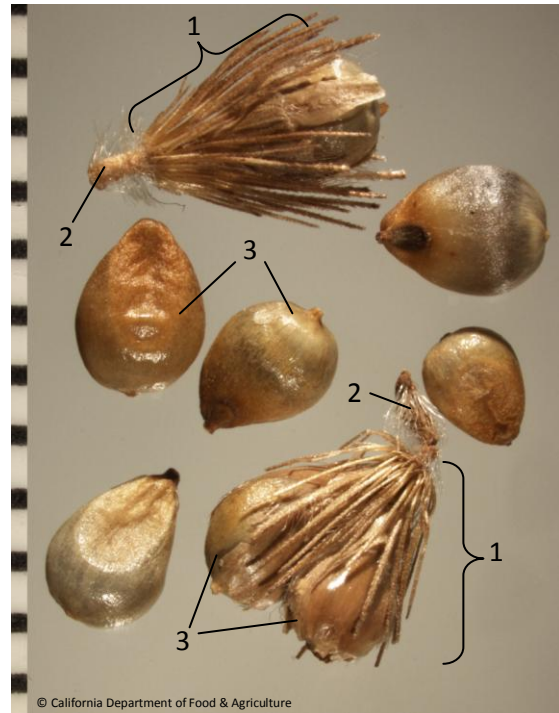
Texture: smooth and shiny

Embryo: 2/3 the length

Endosperm: firm to chalky

Hilum: oval

Description by Deborah Meyer
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Pennisetum glaucum fascicles (1) with persistent rachises (2) attached and free caryopses (3).



Caryopsis in dorsal view showing embryo (4) and ventral view showing hilum (5).

Images by Jim Effenberger