



# *PENNISETUM ALOPECUROIDES*

## Swamp Foxtail

A strongly tufted and coarse perennial, growing to 1.5 m in height. *Culms* arising from stout, almost tuberous root stocks, hairless, except for some slight hairiness for some distance below the inflorescence, flattened. *Nodes* hairless. *Leaves* mostly basal. *Leaf sheaths* shiny, hairless, loose, striate, enlarged and flattened towards the base. *Ligule* a rim of short hairs. *Leaf blades* hairless, except for some soft hairs on the margins above the ligule, downwardly rough along the edges, flat, about 6 mm wide and up to 70–80 cm long, the nerves fairly prominent.

*Inflorescence* a dense, spike-like panicle, up to 30 cm long. *Spikelets* (S) all alike, about 7 mm long, closely arranged around the axis, each on a short, slightly hairy pedicel, falling entire with the pedicel at maturity, a rim of up to 12 long bristles subtending each spikelet and exceeding them by more than twice the length, thus lending the “foxtail” effect to the inflorescence. *Florets* 2, the lower sterile and reduced to a lemma, the upper floret bisexual. *Glumes* (G<sub>1</sub>, G<sub>2</sub>) very dissimilar, membranous; the lower glume (G<sub>1</sub>) minute, nerveless; the upper (G<sub>2</sub>) slightly more than half the length of the spikelet, 3–4-nerved. *Lemma* (L<sub>1</sub>) of the lower sterile floret the length of the spikelet, membranous, 7–9-nerved, broad and partly enclosing the upper fertile floret. *Palea* absent. *Lemma* (L<sub>2</sub>) of the upper fertile floret similar to L<sub>1</sub>, but 5-nerved. *Palea* (P<sub>2</sub>) 4-nerved and 2-keeled, almost as long as the lemma, membranous. *Anthers* 3, 3 mm long.

The grass is commonly found growing in damp localities and along stream banks. It is a coarse, shiny, green grass forming large tufted clumps, and is not readily eaten by stock, particularly once it has become rank. The foxtail inflorescence is a striking feature of the grass and readily distinguishes it.

Elephant or Napier grass (*P. purpureum*) and Kikuyu grass (*P. clandestinum*) are two important pasture species; the latter is sufficiently different in the appearance of its inflorescence to require a separate illustration (see opposite). Kikuyu is best suited to fairly rich upland soils in areas of more than 900 mm rainfall. Elephant grass is usually grown as a short-term forage grass in wet coastal areas.

### REFERENCES

Bailey (1902),<sup>1</sup> pp. 1840–41; Gardner (1952),<sup>2</sup> pp. 276–83; Bor (1960),<sup>3</sup> pp. 341–52; C.S.I.R.O. Australia (1967),<sup>4</sup> pp. 77–80; Commonwealth Bureau of Pastures and Field Crops (1968*a*, 1969*a*);<sup>5,6</sup> Barnard (1969),<sup>7</sup> pp. 56–61; Burbidge and Gray (1970),<sup>8</sup> p. 68; Mears (1970),<sup>9</sup> pp. 139–40; Willis (1970),<sup>10</sup> pp. 202–4; Beadle *et al.* (1972),<sup>11</sup> p. 672; Vickery (1975),<sup>12</sup> pp. 241–53; Black (1978),<sup>13</sup> pp. 228–29.

### KEY TO SPECIES

1. Spikelets concealed within leaf sheath. Strongly stoloniferous. (Kikuyu grass) (see illustration opposite)  
Inflorescence prominent. Plants not stoloniferous.

*P. clandestinum*<sup>2,5,7,9,10,11,12,13</sup>  
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| <p>2. Spikelets densely congested on rhachis; bristles often inconspicuous; grain often protruding from spikelet.<br/>Cultivated annual (pearl or bulrush millet)</p> <p>Spikelets crowded on rhachis, but not congested; bristles invariably conspicuous; grain not protruding. Mostly perennials.</p>                            | <p><i>P. americanum</i><sup>2,3,5,10,12</sup><br/>(<i>typhoides</i>)</p> <p>2</p>                     |
| <p>3. Bristles of involucre finely hairy.<br/>Bristles of involucre without hairs.</p>   | <p>4</p> <p>7</p>   |
| <p>4. Spikelets (excluding involucre) 10–12 mm long. (Feather-top, feather grass or white foxtail)<br/>Spikelets (excluding involucre) 4–7 mm long.</p>  | <p><i>P. villosum</i><sup>2,3,8,10,11,12,13</sup></p> <p>5</p>  |
| <p>5. Rhachis of inflorescence rounded. Leaves narrow, usually folded (mountain grass)<br/>Rhachis with pedicels of spikelets extended downwards into sharply keeled ridges. Leaves flat, up to 12 mm wide.</p>  | <p><i>P. setaceum</i><sup>10</sup></p> <p>6</p>   |
| <p>6. Spikelets solitary and sessile within involucre, bristles densely plumose (mission grass)<br/>Spikelets solitary and pedicelled or in clusters with one pedicelled and the others sessile within involucre, bristles finely plumose.</p>   | <p><i>P. polystachion</i><sup>3</sup></p> <p><i>P. pedicellatum</i><sup>3</sup></p>                   |
| <p>7. Plants annual, branching widely at upper nodes (asbestos grass)<br/>Plants perennial, mostly branched from below.</p>  | <p><i>P. basedowii</i><sup>2</sup></p> <p>8</p>   |
| <p>8. Involucres borne on 1–3 mm long pedicels; spikelets, excluding awns and bristles, 7–8 mm long. Culm bases robust and strongly flattened (swamp foxtail)</p> <p>Involucres sessile or on pedicels up to 1 mm long; spikelets, excluding awns and bristles, less than 7 mm. Culm bases, if robust, not strongly flattened.</p> | <p><i>P. alopecuroides</i><sup>1,3,8,10,11</sup><br/>(<i>compressum</i>)<sup>12,13</sup></p> <p>9</p> |
| <p>9. Plants vigorous, generally exceeding 2 m; leaves broad. Inflorescence 8–30 cm long; rhachis with dense, short hairs. Cultivated forage grass (elephant or Napier grass)<br/>Plants slender, up to 60 cm high; leaves narrow. Inflorescence up to 10 cm long; rhachis rough, but not hairy. Rare.</p>                         | <p><i>P. purpureum</i><sup>2,3,4,6,12</sup></p> <p><i>P. glabrum</i></p>                              |