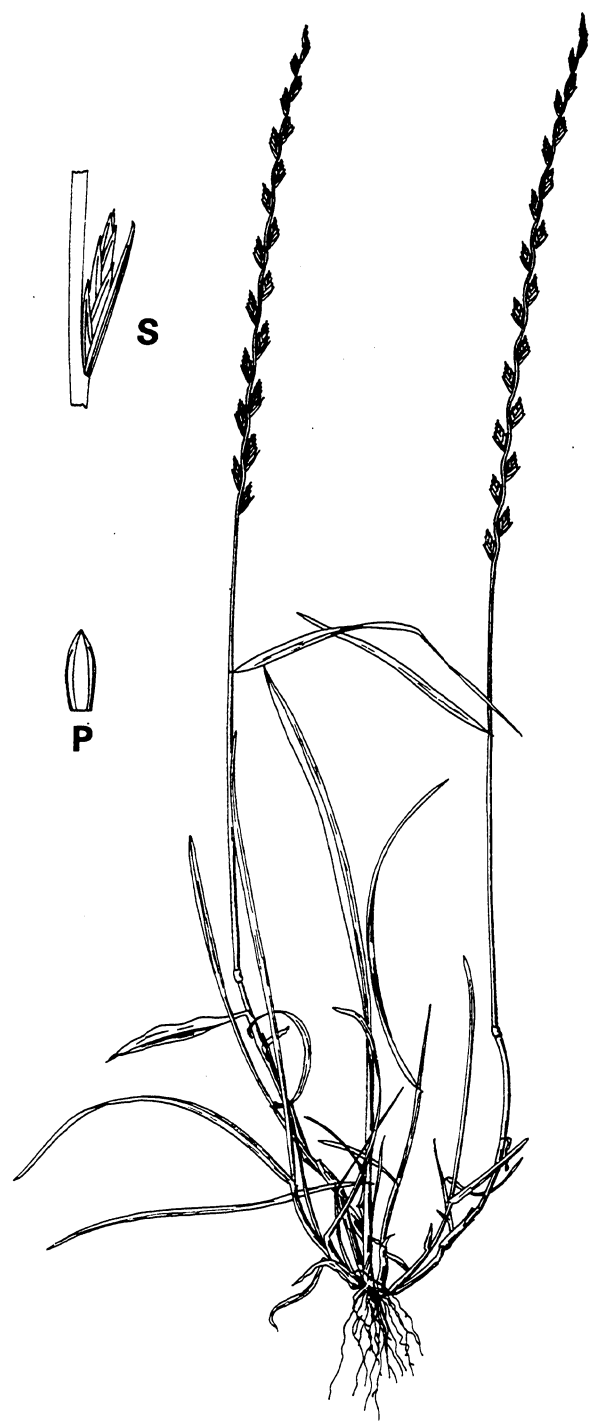


**X2.1**



# *LOLIUM PERENNE*

## Perennial Ryegrass

A loosely to densely tufted perennial, 10–90 cm high. *Culms* erect or spreading, slender, hairless and smooth, unbranched. *Nodes* 2–4, hairless. *Leaves* well distributed, basal and on the culms. *Leaf sheaths* smooth, striate, the basal portion distinctly pinkish when young, tight-fitting, slightly flattened and keeled. *Ligule* up to 2 mm long, membranous, truncate. *Leaf blades* smooth and shining, flat, but somewhat keeled in the lower part, the base extended into two ears, which clasp the culm, blades parallel-sided for much of their length, 3–20 cm long, 2–6 mm wide.

*Inflorescence* a spike, straight or slightly nodding, 4–30 cm long. *Spikelets* (S) laterally flattened, all similar, 7–20 mm long, sessile and borne edgewise and alternately along either side of the slightly zig-zag axis, breaking up at maturity above the glumes into separate florets. *Florets* 4–14, all similar and bisexual. *Glumes* ( $G_1$ ,  $G_2$ ) similar, persistent, usually shorter than the spikelet, blunt, rounded on the back, 5–7-nerved, smooth; the lower glume ( $G_1$ ) present only on the terminal spikelet of each spike, absent on the spikelets below; the upper ( $G_2$ ) on the outside, present on all spikelets. *Lemmas* (L) all similar, though decreasing in size towards the tip of the spikelets, overlapping, bluntly pointed, 5-nerved, 5–7 mm long, smooth. *Paleas* (P) as long as the lemmas, the 2 keels slightly rough. *Anthers* 3, 3–4 mm long.

This is a useful winter-grazing grass of high quality, which originates in Europe. It is sometimes used under irrigation in favoured sites in southeast Queensland. A selected hybrid from *L. multiflorum* x *L. perenne*, developed in New Zealand, is known as “short rotation ryegrass” or H1 and is perhaps more extensively used in cultivated pastures. *L. rigidum* is grown widely in southern Australia and is sometimes included in dry-land, winter pastures in southeast Queensland. *L. loliaceum* and *L. temulentum* are rare weedy annuals.

### REFERENCES

Bailey (1902),<sup>1</sup> p. 1919; Gardner (1952),<sup>2</sup> pp. 190-93; C.S.I.R.O. Australia (1967),<sup>3</sup> pp. 12-24; Burbidge and Gray (1970),<sup>4</sup> pp. 26-27; Willis (1970),<sup>5</sup> pp. 105-8; Beadle *et al.* (1972),<sup>6</sup> pp. 638-39; Black (1978),<sup>7</sup> pp. 149-50; Jessop (1981),<sup>8</sup> p. 430.

### KEY TO SPECIES

- |                                                                               |   |                                              |
|-------------------------------------------------------------------------------|---|----------------------------------------------|
| 1. Glume much shorter than spikelet.                                          | 2 |                                              |
| Glume slightly shorter or about equal to spikelet.                            | 3 |                                              |
| 2. Perennial; lemmas awnless (perennial ryegrass)                             |   | <i>L. perenne</i> <sup>1,2,3,4,5,6,7,8</sup> |
| Annual or biennial; lemmas awned (Italian ryegrass)                           |   | <i>L. multiflorum</i> <sup>2,3,4,5,6,7</sup> |
| 3. Lemmas very turgid at maturity (darnel)                                    |   | <i>L. temulentum</i> <sup>1,2,5,6,7</sup>    |
| Lemmas not turgid at maturity.                                                | 4 |                                              |
| 4. Spikes cylindrical; rhachis thick and robust (stiff rye-grass grass)       |   | <i>L. loliaceum</i> <sup>2,5,6,7</sup>       |
| Spikes not cylindrical; rhachis thin and slender (annual or Wimmera ryegrass) |   | <i>L. rigidum</i> <sup>2,3,4,5,6,7,8</sup>   |