

Growing Perennial Ryegrass for Forage

Area of Adaption

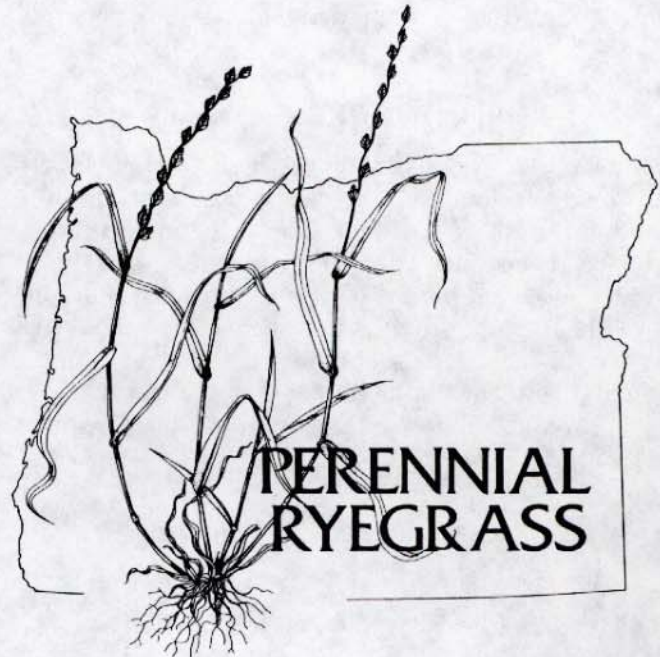
Perennial ryegrass (*Lolium perenne*) is a major forage grass which is used in cool, temperate climates throughout the world. In Oregon, it is adapted to areas west of the Cascade Mountains but is less winter-hardy than orchardgrass or tall fescue. For this reason it is not often recommended for use east of the Cascades.

Primary Use

Perennial ryegrass is commonly used for pasture and hay in sheep, dairy, and beef production. It is most often used in combination with white clover or subclover. When ryegrass is seeded with either of these clovers, the mixed pasture makes an excellent quality feed for the grazing animal. Perennial ryegrass does not persist as long as some other pasture species, but it is quite satisfactory for several years. Tetraploid ryegrasses have been developed recently for use as an ingredient of short-rotation dairy pastures.

Varieties

Linn is a relatively long-lived variety that has been used successfully in Oregon for many years. Astor is a variety that has been used for dairy pastures on the Oregon coast. Several proprietary varieties are also available from private seed companies.



Recent developments in plant breeding have resulted in tetraploid ryegrass varieties. Autotetraploids (produced by duplication of the chromosome sets from one species) will have perennial characteristics. However, allotetraploids (produced by combining chromosomes from two species—perennial and annual) are likely to be short-lived and should only be used in short-rotation pastures (2-4 years).

Use	Precipitation	Perennial ryegrass seeding rate	Companion species	Companion species seeding rate
	<i>Inches</i>	<i>Lbs/A</i>		<i>Lbs/A</i>
Pasture	Irrigated	10-12	White clover	2-3
	> 60	10-12	White clover	2-3
	40-60	10-12	White clover or subclover	2-3
	< 40	10	Subclover	7
Short-rotation pasture	> 40 or irrigated	(tetraploid) 10-12	White clover	2
			plus red clover	4

Establishment

Perennial ryegrass may be fall seeded in areas with relatively mild winters. Seed should be planted in late summer before the fall rains begin. Spring seeding is possible where adequate moisture is available for seedlings to develop before the arrival of dry summer conditions. Seed should be planted $\frac{1}{4}$ to $\frac{1}{2}$ inch deep in a well-prepared seedbed.

Fertility and pH Requirements

Perennial ryegrass requires high fertility levels for good production. If ryegrass is grown in combination with a nitrogen-fixing legume, it will not be necessary to apply nitrogen, but adequate levels of phosphorus and sulfur should be provided. Best growth will occur between pH 5.5 and 6.5. Specific recommendations based upon soil data are available in OSU Fertilizer Guides 1, 4, 16, and 58, depending upon the location and use of the pasture.

Management

In order to obtain the highest quality forage, clover-grass pastures should be grazed between 2 and 6 inches high to prevent the grass from shading the clover. Pastures are often grazed early in the season, and some areas are reserved for hay when growth exceeds the demand. For highest quality, hay should be cut when the inflorescence is emerging from the leaf sheath and certainly before flowers begin to shed pollen.

Spring application of nitrogen will stimulate early growth of the grass but will reduce the amount of clover in the pasture. Clovers are favored by continued close grazing (to 2 inches), adequate levels of phosphorus and sulfur, and no nitrogen applications. If clovers disappear from the pasture, they may be re-established by renovation techniques.

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