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Growing Orchardgrass for Forage

Area of Adaption

Orchardgrass *(Dactylis glomerata)* is distributed through much of the northeastern and north-central United States and in the high rainfall and irrigated regions of the western mountains. It is often found growing along roadsides and in waste areas. Its tolerance of shady places in orchards undoubtedly led to its most widely known common name. Orchardgrass is known as "cocksfoot" in Europe, New Zealand, and Australia. This name was derived from the shape of its inflorescence.

Primary Use

Orchardgrass is used primarily as a hay or pasture crop and in combination with various legumes. It is a highly productive grass with a good production distribution throughout the year when maintained under high fertility levels. At high levels of nitrogen (without legumes) orchardgrass is among the most productive cool-season grasses. Orchardgrass is more tolerant of heat and drought than perennial ryegrass, timothy, or Kentucky bluegrass but less so than tall fescue. Winter production of orchardgrass is usually less than that of perennial ryegrass or tall fescue as orchardgrass is more affected by frost.

Varieties

Orchardgrass breeders have concentrated on developing varieties that mature later than com-

Use	Precipitation	Orchardgrass seeding rate	Companion species	Companion species seeding rate
	Inches	*Lbs/A*		*Lbs/A*
Pasture	> 60	10-12	White clover	2-3
	40-60	10-12	White clover	2-3
		10-12	Subclover	7
	< 40 or	10-12	Subclover	7-10
	irrigated	10-12	White clover	2-3
		7	Birdsfoot trefoil	6
Hay	40-60	5-6	Alfalfa	10
		12-15	--------	--------

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mon orchardgrass, are more productive, and more resistant to disease. Potomac is an early variety, Pennmead and Sterling are intermediate, and Pennlate and Latar are late maturing varieties. When used in combination with alfalfa, late maturing varieties are preferred to better coincide with the harvest date of alfalfa.

Establishment

When used in its area of adaption, orchardgrass is easily established. Orchardgrass can be established in early spring or late summer. Seeding rates and suggested combination species are shown in the table on page 1. The seedbed should be loose on top and firm below a depth of 2 inches. Seed should be planted ½ inch deep. If clover is mixed with orchardgrass, a planting depth of ¼ inch is sufficient. The use of a press wheel or cultipacker will help to ensure stand survival when orchardgrass is planted on a dry seedbed. Seedling growth may be retarded by inadequate levels of phosphorus in the soil.

Fertility and pH Requirements

If used without a legume, orchardgrass is very responsive to nitrogen fertilization. Yield responses to phosphorus and potassium fertilization have also been demonstrated for orchardgrass. Best growth will occur between pH 5.5 and 6.5 as orchardgrass is less tolerant of soil acidity than many other pasture grasses. Specific recommendations on fertilizer application based upon soil test information are found in OSU Fertilizer Guides 1, 16, 28, and 58.

Management

Highest yields of good-quality forage are obtained when orchardgrass hay is cut between head emergence and early bloom. Delaying harvest an additional 2 weeks will decrease aftermath harvest by one-fourth in addition to reducing the quality of hay cut at a late stage of maturity. Orchardgrass stands become thin and clumpy when first growth is cut late. However, stand longevity is not adversely affected by late cutting.

Regrowth of orchardgrass depends upon photosynthetic activity and carbohydrate reserves. When root reserves are high, close cutting or grazing does not adversely affect the stand. However, when reserves are low, close cutting is a severe management practice. Thus, cutting several times at ground level or continuous close grazing almost always results in serious stand injury. Injury also may result from burning in areas where excess forage is removed in this way (in late summer) to allow subclover seedlings to become established during the fall.

When planted in combination with orchardgrass, clover is favored by close clipping or grazing because it receives less shading from the grass. Adequate levels of phosphorus, potassium, and sulfur also favor the clover in a mixed clover-grass pasture. The application of nitrogen, however, favors the grass and may result in the disappearance of clover from the pasture.

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