

Growing Timothy for Forage

Area of Adaption

Timothy (*Phleum pratense*) is distributed throughout temperate and subarctic climates. It is adapted to cool, humid climates and is sensitive to drought. In Oregon it is best adapted to areas where rainfall is above 20 inches annually.

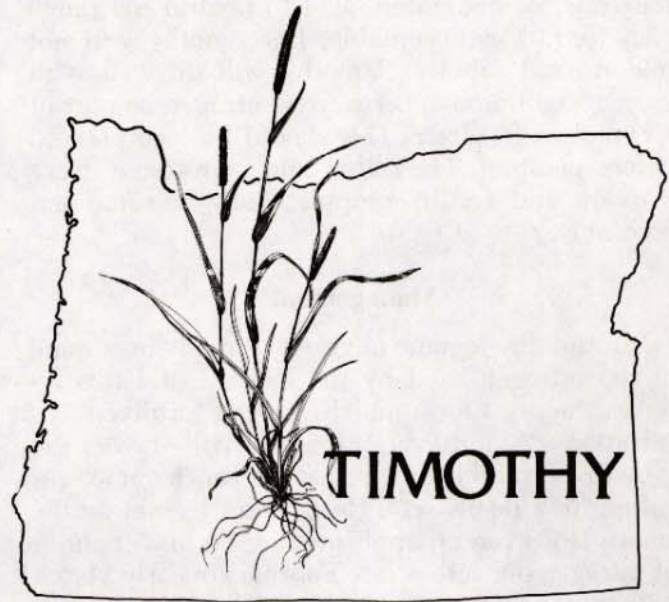
Primary Use

Timothy is grown primarily for hay in Oregon but also can be used in combination with legumes and other grasses as a short-lived perennial grass. It is well suited for use on well-drained, but moist, clay or loam soil. On well-drained soil, alfalfa will do well with timothy, but alfalfa alone will be more productive. Red clover also can be used with timothy, but this mixture has a stand life of only 3 years. In wetter areas, birdsfoot or big trefoil are suitable legumes for use with timothy.

Timothy hay is highly valued as a desirable and palatable horse feed. As with most grasses, it is low in feed value if harvested at a late stage of maturity.

Varieties

Climax is an early maturing variety that has been suggested for use in Oregon for many years. Several other improved varieties have been developed, including Basha, Champ, and Clair.



Establishment

Timothy, when established with a legume, should be planted at the recommended time for planting the legume. If sown alone as a hay crop, timothy can be seeded in early spring or late summer. Spring plantings should allow 4-6 weeks of establishment time before the dry summer period, and an equal amount of time should be allowed before the first freeze is expected for fall plantings.

Use	Precipitation	Timothy seeding rate	Companion species	Companion species seeding rate
	<i>Inches</i>	<i>Lbs/A</i>		<i>Lbs/A</i>
Hay	40-60	6	-----	-----
		4	Alfalfa	6-8
		4	Red clover	8
	> 60 or irrigated	4	Birdsfoot trefoil	6
		2	Big trefoil	2
		2	Birdsfoot trefoil	6
Wetland pasture	40-60	4	Birdsfoot trefoil	6

Seed should be planted less than $\frac{1}{4}$ inch deep in moist soil (about 60 percent of field capacity). Very wet conditions may necessitate surface seeding, while dry conditions will require somewhat deeper planting.

Fertility and pH Requirements

Liming and fertilization should be based on soil tests. A moderately acid to neutral pH range (5.5 to 7.0) is acceptable, but timothy will not tolerate soil salinity. Timothy will do well with only a small amount of starter nitrogen as part of a complete fertilizer. This should be incorporated before planting. The soil should be retested every 2 years and fertilizer applications adjusted accordingly.

Management

In timothy-legume mixtures, timothy uses some of the nitrogen fixed by the legume, and this reduces the need for applied nitrogen fertilizer. Application of fertilizer nitrogen will favor the growth of timothy over that of the legume, resulting in a decrease in the percent legume in the stand. However, an application of 30 to 35 pounds of nitrogen per acre in late February or early March will stimulate the growth of the timothy and provide additional early growth and forage.

If grown alone, timothy requires split nitrogen applications for maximum yield. However, total

nitrogen application should not exceed 150 to 200 pounds per acre, because of the potential for lodging at high rates of nitrogen.

Timothy or timothy-legume mixtures should be harvested at an early stage of maturity for highest hay quality. An early cut hay will provide a much higher percent of digestible protein and metabolizable energy than late cut hay. However, greater quantities of dry matter are produced in later harvests. A suitable compromise between quality and quantity is to harvest the timothy shortly after emergence of the seed head from the leaf sheath. In the mid- and late-season varieties, this stage of maturity will occur in late June or early July when the risk of rain is low.

Persistence

Stand life of timothy will be increased by proper fertility and cutting management. Providing adequate nutrients to replace those removed in hay crops is important. In addition, the plant must be allowed to store adequate food reserves (carbohydrates) in its roots and crown area for winter survival. If used for grazing, timothy is very short-lived.

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