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Growing Vetch for Forage

Area of adaptation

Hairy vetch *(Vicia villosa)* and common vetch *(Vicia sativa)* are viny annual legume forages that are grown widely in temperate areas of the world. In the United States, 85% of the vetch produced is hairy vetch because of its greater winter hardiness. Hairy vetch can be grown in most crop-producing areas of the United States.

Common vetch is less winter hardy and is grown as a fall-seeded winter annual only in regions with mild winters. Both vetches are adapted to a wide range of soil types, but hairy vetch is better adapted to soil type extremes.

In Oregon, vetches are primarily suited to areas west of the Cascade Mountains.

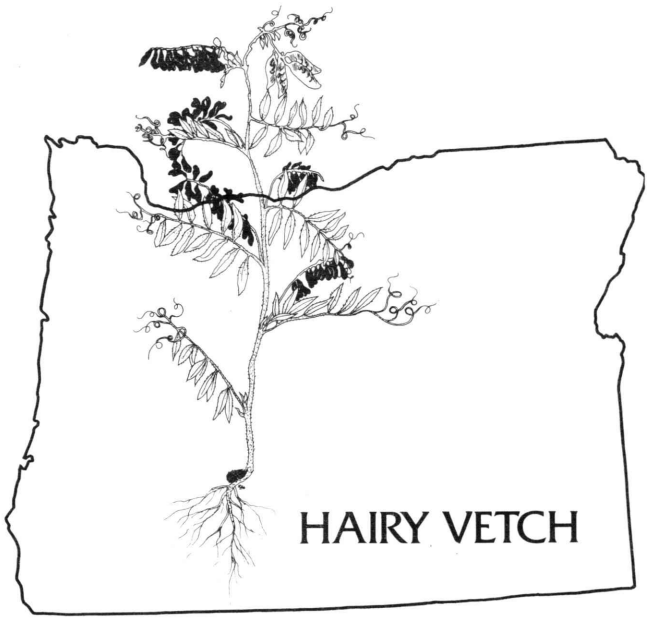
Primary use

Vetches make excellent pasture or hay, but they also are used extensively as a green manure crop. Increased yield of crops following vetch turned under for green manure is brought about in part by the additional nitrogen that vetch provides. Legumes take nitrogen from the air and soil during plant growth. That nitrogen is made available to succeeding crops when the crop decomposes. When used as a pasture crop, vetches often are mixed with small grains or annual ryegrass.

Use	Precipitation	Vetch seeding rate	Companion species	Companion species seeding rate
	inches	*lbs/A*		*lbs/A*
Green manure crop	40-60	Hairy-30	.....	.....
		Hairy-20	Small grain	80
Pasture	40-60	Hairy-15	Annual ryegrass	10
		Common-30		
Hay/silage	40-60	Hairy-15	Oats or annual	40
		Common-30	ryegrass	10

Varieties

Madison is a hairy vetch variety released by the University of Nebraska. A subspecies of *Vicia villosa varia* was formerly called woollypod vetch. Its common name has been changed to winter vetch. Winter vetch is somewhat less winter hardy but is more heat-tolerant than hairy vetch. Varieties of winter vetch include Auburn, Oregon, and Lana, released by the Alabama, Oregon, and California experiment stations, respectively.



Common vetch varieties include Caba white, Nova II, Vanguard, Vantage, Warrior, Willamette, and Woodford big flower.

Establishment

Plant hairy vetch in the fall from late August to early October. Common vetch, because of its lower winter hardiness, is planted in the spring.

When vetches are seeded following a cultivated crop, little seedbed preparation is needed. Seed is usually broadcast and disked in. On heavy clay soils, plowing and disking may be necessary before seeding.

If drilled or covered to make beds or ridges on poorly drained soil, seed may be planted as deep as 4 inches. Shallower plantings will give good stands if sufficient moisture is present.

Fertility and pH requirements

In western Oregon, calcium sulfate (gypsum) is commonly applied at the rate of 75 to 150 lbs per acre. This

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provides an adequate source of sulfur fertilizer but will not correct soil acidity problems. When the pH is below 5.5, limestone will be necessary for optimal production.

Phosphorus fertilization is often required. An application of 60 lbs of P_2O_5 (26 lbs P) usually meets vetch requirements in western Oregon. Nitrogen fertilizer is not needed, as vetch obtains its nitrogen through symbiotic nitrogen fixation with bacteria in plant root nodules. Specific fertilizer recommendations based upon soil test data are provided in OSU Fertilizer Guide 30.

Management

When vetch is grown as a green manure crop, the time for turning it under depends upon the amount of growth the vetch has made and the expected date of planting the succeeding crop. If turned under too early in the spring, vetch will have little fertilizer value; if too late, it will be difficult to incorporate into the soil. A height of 1 to 2 feet may be considered an approximate guide. Turn under with a plow. Allow 2 to 3 weeks after turning before planting the next crop.

For pasture, vetches extend the grazing season by providing late fall and early spring forage. Pasture only when the ground is dry, to avoid packing the soil and to reduce the possibility of bloat.

Vetches make high quality hay, either grown alone or mixed with small grain. Hay quality is determined primarily by stage of maturity. Vetch normally is cut for hay when the first pods are well developed. If vetch is grown with a small grain, the grain should be in the milk or early soft dough stage before cutting and will make good quality hay or silage.

This publication was prepared by David B. Hannaway, Extension agronomist, and William S. McGuire, professor of agronomy, Oregon State University.

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