



Butch, the Washington State University mascot, and Cougar, a tough new turfgrass developed at WSU. Cougar forms a dense, wear-resistant turf that's excellent for athletic fields as well as home lawns.

COUGAR KENTUCKY BLUEGRASS

Cougar, a new dwarf Kentucky bluegrass for the Inland Empire area of the Pacific Northwest, has a number of outstanding characteristics—

Dwarf growth habit. Forms dense, wear-resistant turf that discourages invasion by weeds and can be clipped as low as $\frac{1}{2}$ inch from the ground without reducing its vigor.

Strong rhizome formation. Produces underground rhizomes that fill in open turf and heal damaged areas rapidly.

Rapid germination. Establishes quickly, giving new seedings a head start over weeds.

Long growth period. Maintains dark green color late into the fall and starts growing earlier in the spring than other popular bluegrass varieties.

Good nitrogen response. Responds well to heavy nitrogen fertilization, producing vigorous growth and a deep green color.

Good disease resistance. Resists mildew and leaf rust and, to some extent, stripe smut.

Cougar is excellent for home lawns and is especially good for recreation areas that receive heavy use, including football fields, city parks, and golf course tees and fairways.

DESCRIPTION

Cougar Kentucky bluegrass is dark green and has a low-growing dwarf habit. The leaves are wider than Merion bluegrass. Although this difference tends to disappear in dense turf, Cougar is strongly rhizomatous. The rhizomes creep and produce new shoots that fill in open areas.

PERFORMANCE

Cougar maintains a dense turf, in vigorous condition, even when clipped as low as $\frac{1}{2}$ inch in height as shown by both the visual rating and the number of shoots per 4-inch plug (Table 1). In contrast, tall-growing varieties, such as Delta, show greatly reduced numbers of shoots when clipped this close to the soil surface.

The dense turf formed by Cougar discourages weed invasion. The Cougar plots had fewer weeds than those of the other varieties.

Cougar keeps its green color late into the fall and starts growing earlier in the spring than Newport, Delta, or Merion Kentucky bluegrass.

Cougar is resistant to mildew and leaf rust, two diseases which severely damage Merion Kentucky bluegrass. In tests at Pullman, 100 per cent of the Merion plants were infected by mildew while less than 5 per cent of the Cougar plants were infected. Cougar is slightly more susceptible to leaf rust than Delta or Newport, but it is more resistant than Merion. In addition, Cougar is affected less by stripe smut than any of the other bluegrasses tested. Stripe smut is a leaf smut that gives an undesirable color to the turf as well as discoloring shoes and clothes.

Table 1. DENSITY AND WEED INVASION OF TURFGRASS AFTER 3 YEARS OF CUTTING AT VARIOUS HEIGHTS

Variety	Cutting Height of Grass					
	1 in.		$\frac{1}{2}$ in.		1 in.	
	visual density ¹	shoots per 4-in plug	visual density ¹	shoots per 4-in plug	per cent weeds	per cent weeds
Cougar	2	1	160	168	0	0
Merion	3	3	150	170	5	5
Newport	4	4	133	150	5	5
Delta	6	9	128	112	45	45

¹ A rating of 1 is most dense; 9, least dense.

Cougar has excellent seedling vigor, quite often producing a wear-resistant turf in half the time required for Merion bluegrass. Moreover, its rapid germination and emergence gives it a much greater competitive advantage with weeds in newly established seedings.

ADAPTED AREAS

Cougar Kentucky bluegrass has been tested in several states. At the present time, it is recommended in the Inland Empire area of the Pacific Northwest and in Kansas, Iowa, and Missouri.

MANAGEMENT

New seedings can be made any time during the growing season although spring and late summer are the preferred seeding time. Seed at 2 pounds per 1,000 square feet.

This grass responds to high rates of nitrogen fertilization. A yearly rate of 8 to 10 pounds of available nitrogen per 1,000 square feet gave the best response in tests at Pullman (Table 2). The nitrogen was applied at monthly intervals during the growing season. Phosphorus and potassium should be supplied in amounts indicated by soil test results.

Cougar bluegrass should be mowed at $\frac{1}{2}$ to 1 inch above the ground. Clippings should be removed from spring and fall mowings.

Cougar should be watered as necessary to maintain a good turf during the dry summer months.

SEED PRODUCTION

The seed of Cougar bluegrass is about 20 per cent larger than common bluegrass and it has much less webbing or fuzz at the base of the seed. This reduced webbing simplifies processing and cleaning, which have been a problem with other bluegrass varieties. Cougar seed is easy to process.

Seed production has been superior to Merion both under dryland and irrigated conditions (Table 3). The seed matures about one week later than Merion and seed shatter in the field has been signifi-

Table 2. EFFECT OF VARIOUS RATES OF NITROGEN FERTILIZER ON TURFGRASS QUALITY

Variety	Yearly Rate of Nitrogen (N) per 1,000 Sq. Ft.		
	10 lbs.	5 lbs.	none
	<i>visual estimate of turf quality</i> ¹		
Cougar	1.7	2.2	5
Merion	2.3	3.0	9
Newport	2.7	3.0	5

¹A rating of 1 is best.

Table 3. SEED YIELD OF TURFGRASS VARIETIES AT PROSSER AND PULLMAN

Variety	Prosser (irrigated)		Pullman (dryland)	
	Yield	Test Weight	Yield	Test Weight
Variety	lbs.	lbs./bu.	lbs.	lbs.
Cougar	801	21	506	27
Cougar	465	21		27
Merion	465	23	287	25
Newport	834	23	544	23
Delta	873		544	

cantly less. This greatly reduces harvest losses and also results in plump, well-filled seed that gives rapid germination and seedling establishment.

HISTORY

Cougar bluegrass was released by Washington, Oregon, and Idaho in 1965. It was selected from a 1934 plant introduction, FC 22,190, from Denmark. Final selection was made by J. L. Schwendiman, Soil Conservation Service Plant Material Specialist, and A. G. Law, Agronomist at Washington State University.

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