



United States Department of Agriculture  
Natural Resources Conservation Service  
Plant Materials Program

# 'El Vado' Spike Muhly

*Muhlenbergia wrightii* Vasey

A Conservation Plant Release by USDA NRCS Los Lunas Plant Materials Center



'El Vado' spike muhly

'El Vado', a new variety of spike muhly (*Muhlenbergia wrightii* Vasey), has been released by the USDA-Natural Resources Conservation Service Los Lunas Plant Materials Center, the New Mexico State University Los Lunas Agricultural Science Center, the Colorado State University, and the New Mexico Department of Transportation.

## Description

'El Vado' spike muhly is a warm-season, perennial bunchgrass. The plants are light green in color and have stems 8 to 20 inches (20 to 50 cm) tall. Leaf sheaths are purple near the stem joints. Leaves are 3 to 6 inches (8 to 15 cm) long and 1/8 inch (0.3 cm) wide. Short underground stems or rootstocks are found on some plants.

## Source

The original 'El Vado' spike muhly seed was collected west of Park View, New Mexico in 1958.

## Conservation Uses

This species is a good soil binder. 'El Vado' spike muhly can be used for soil stabilization and revegetation where vegetation has been reduced or destroyed by surface mining, construction activities, brush control, overgrazing, or fires.

This grass is palatable to all classes of domestic livestock. It is excellent forage for deer and elk throughout the year.

## Area of Adaptation and Use

'El Vado' spike muhly is adapted to a wide variety of soil types in the upper pinyon-juniper and ponderosa pine vegetation zones at elevations from 3,800 to 9,000 feet

(1000 to 3000 m) in Colorado, New Mexico, Utah, and Nevada. It is most abundant in meadows or park-like openings of forested areas.

## Establishment and Management for Conservation Plantings

Planting date varies with location, but the seed should generally be planted during mid-spring or late July. Annual weeds are usually less competitive in late July plantings.

Recommended planting rate is 2 to 3 pounds per acre (2.2 to 3.3 kg/ha) of pure live seed. Plant seed 0.25 inch (6 mm) deep in rows 30 to 40 inches (80 to 100 cm) apart so there is room to irrigate and cultivate. If the seed rows are placed on beds or beside corrugations, and if the field is properly leveled and smoothed, the new plantings can be irrigated without covering the seed with water. This is especially important in establishing a stand in soils susceptible to surface crusting.

A soil test is recommended as an aid in determining fertilizer needs. However, experience may be the best guide. In lieu of other guides, annual fertilizer rates of 80 pounds per acre (90 kg/ha) of available nitrogen may be used under irrigation.

Seed matures in October or early November at Los Lunas, New Mexico. A small-grain combine can be used to harvest the seed.

## Ecological Considerations

Diseases of this variety have not been observed in rangeland or seed production plantings.

'El Vado' spike muhly is naturally resistant to wheat curl mite (*Aceria tulipae*) which produces a seedhead gall. This gall moderately-to-severely reduced seed yields on all other spike muhly strains at most test locations. Four species of stem-boring insects (*hymenoptera*) have been found in 'El Vado' spike muhly plants, but their effect on seed yield has not been determined.

## Seed and Plant Production

'El Vado' spike muhly was superior or equal in seed production, seedling vigor, and forage production in almost every comparison to other spike muhly strains at Clovis, Las Cruces, and Los Lunas, New Mexico.

For rangeland plantings, a seeding rate of one pound per acre (1 kg/ha) of pure live seed is recommended.

At Los Lunas, 'El Vado' spike muhly produced a four-year average yield of 150 pounds per acre (168 kg/ha) of pure live seed in one field, and a two-year average of 116 pounds per acre (130 kg/ha) in another planting.

Unlike many grass species, mature plants of 'El Vado' are resistant to seed shattering. This is an asset to seed production.

#### **Availability**

*For seed or plant increase:* Limited amounts of foundation 'El Vado' spike muhly seed are available to growers through Crop Improvement Associations and Natural Resources Conservation Service offices or Soil and Water Conservation districts. Some seed is commercially available.

*For more information, contact:*  
Los Lunas Plant Materials Center

1036 Miller Road SW  
Los Lunas, NM 87031  
Tele: 505-865-4684  
FAX: 505-865-5163

<http://plant-materials.nrcs.usda.gov/nmpmc/>

#### **Citation**

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <http://www.nrcs.usda.gov/>, and visit the PLANTS Web site <http://plants.usda.gov> or the Plant Materials Program Web site <http://www.plant-materials.nrcs.usda.gov>



This is a joint release among New Mexico State University's Los Lunas Agricultural Science Center, the Colorado State University, the New Mexico Department of Transportation, and the USDA Natural Resources Conservation Service Los Lunas Plant Materials Center.

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