

A Conservation Plant Released by the Natural Resources Conservation Service
Lockeford Plant Materials Center, Lockeford, CA

'Mariposa' Blue wildrye

Elymus glaucus Buckley



Figure 1 'Mariposa' blue wildrye (*Elymus glaucus* Buckley) is a cultivar released in 1990 by the California Plant Materials Center in Lockeford, CA. ©Lockeford Plant Materials Center.

Description

'Mariposa' blue wildrye is a California native cool season perennial bunchgrass. The plants are loosely tufted and the seed heads grow erect to 5 ft in height with an upright growth habit. The leaves are light blue green in color. Leaf blades are flat, and 0.3 – 0.5 in wide and the leaf sheath is glabrous. The flowering spike is 3 -8 in long. 'Mariposa' is highly self-fertile and self-pollinated.

'Mariposa' was not bred but selected for its overall performance and uniformity. It has been evaluated for foliage size, abundance and uniformity; vigor; resistance to disease and drought. The cultivar can be distinguished from other populations tested by its combination of (1)

greater foliage size and abundance, (2) excellent vigor, (3) excellent resistance to disease, (4) excellent resistance to drought, (5) and good seed amount. 'Mariposa' maintains a good vigor for the first four years and ranks high in terms of foliage appearance (primarily less leaf rust). The variety is dormant in the late summer (July to mid-October).

Source

'Mariposa' was collected from a native stand near Mariposa, California at an elevation of 600 ft above sea level, by employees of the NRCS in 1982. 'Mariposa' was evaluated in a common garden at the Lockeford plant materials center against 50 other populations assembled from California. In 1987 four accessions were selected for advanced evaluations. In 1988 three replicated advanced evaluation plantings of the four accessions were established. A 1990 evaluation confirmed that 'Mariposa' (PI – 613563) had better overall performance.

Conservation Uses

'Mariposa' blue wildrye is suitable for erosion control and quick, self-perpetuating cover, forage and wildlife habitat. It would normally be recommended as part of a mix for conservation purposes.

Soil stabilization: 'Mariposa's quick growth and deep root system makes it especially effective for controlling erosion. Blue wildrye is excellent for reseeding burned or disturbed areas in oak woodland or forest. It is very tolerant of fire, burning quickly with little downward transfer of heat. This grass is adapted to drought and the plant goes dormant in the dry summers of California.

Forage: 'Mariposa' blue wildrye is moderately palatable to all livestock, especially in the spring before it becomes coarse. At higher elevations or with adequate moisture it remains green and provides good forage for longer. Prior to maturity, blue wildrye is considered fair to good forage for cattle, horses, and deer. It is poor forage for sheep. In California's Central Valley it becomes dormant early and is less palatable to livestock than other annual grasses.

Wildlife: 'Mariposa' blue wildrye can also provide excellent wildlife habitat for mammals, birds, and insects. It provides good forage early in the season, but later, may be too coarse.

Area of Adaptation and Use

'Mariposa' is recommended for use in Major Land resource Area, (MLRA), 18; however, it is also adapted to

MLRA's 14, 15, 16, 17, and up to 4,000 feet elevation in MLRA 22.

'Mariposa' blue wildrye has shown a preference for loam to clay loam soils. It can persist on moderately deep road cut slopes. It is best grown for seed on well to moderately well drained, moist, medium textured soils. It does not tolerate poor drainage or prolonged flooding. Minimum rainfall requirements vary from 9 to 15 in depending on soil type, elevation and aspect.

Establishment and Management for Conservation Plantings

For conservation plantings, fall seeded plantings are recommended as 'Mariposa' is a cool season grass. The seed germinates with autumn rains and early growth is satisfactory as long as soil moisture and temperature is suitable. For best results, plant into a properly prepared seedbed after appropriate weed management in the year prior to seeding. The planting rate for most vegetative practices is 8 pounds pure live seed per acre drilled and 12 pounds pure live seed per acre broadcast. Weed control of annual grasses until the blue wildrye becomes established will result in a better stand. 'Mariposa' maintains good vigor for the first four years of growth.



Figure 2 'Mariposa' blue wildrye flowering heads.

Ecological Considerations

The fungal pathogens, stripe, rust and ergot can all affect blue wildrye. 'Mariposa' blue wildrye ranked superior in comparison with other cultivars with respect to symptoms of rust on the leaves.

Blue wild rye is native and not considered to be weedy. Please contact your local NRCS Field Office, Cooperative Extension Service Office, or state natural resource or agriculture department regarding its status and use in your area.

Seed and Plant Production

Seeding should be accomplished in fall in a firm well prepared seed bed with seed planted in 24 – 36 inch rows at a depth of 1/2 inch at a rate of 5 lb per acre. Weeds should be controlled by cultivation or herbicides. Irrigation is not required except in dry years. The seed should be harvested when the grain is at the hard dough stage. Flowering occurs in the spring typically in April. Adequate moisture will promote good seed set, but even under adverse conditions of low moisture, seed will be produced in most years. Seed is ripe 6 to 8 weeks after flowering. There is a 2 to 3 week seed maturity period and multiple harvest trips with a vacuum seed stripper during this time can increase yields, a grain combine can be used once seed is fully mature. There are 134,900 seeds per pound.

Availability

For conservation use: 'Mariposa' blue wildrye is available from specialized growers.

For seed or plant increase: Foundation seed is maintained by the USDA-NRCS Plant Material Center in Lockeford, California and available to interested parties for increase purposes. Long-term preservation of seed is stored at the National Plant Germplasm System (NPGS).

For more information, contact:

Lockeford Plant Materials Center
21001 N. Elliott Road, P.O. Box 68
Lockeford, CA 95237
Tel: 209 727 5319 Fax: 209 727 5923

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

Conservation Plant Release Brochure for 'Mariposa' blue wildrye (*Elymus glaucus*). USDA-Natural Resources Conservation Service, California Plant Materials Center. Lockeford, CA 95237. Published January, 2014

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>

Helping People Help the Land

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER