



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

'Cucamonga' California Brome

A Conservation Plant Release by USDA NRCS Lockeford Plant Materials Center, Lockeford, CA



'Cucamonga' California Brome is an annual grass cultivar released in 1949 in cooperation with the California Agricultural Experiment Station.

Description

'Cucamonga' California brome is a self-seeding annual grass. Germination occurs in the fall and continues over the winter, the plant reaches maturity in the early spring. The grass is pale green in color and grows erect up to 3 feet under ideal conditions. The sheath and leaves are sparsely hairy or smooth.

Source

The original collection of this cultivar was made in 1939 near Cucamonga, San Bernardino County, California. The species was grown and evaluated for 8 generations by the San Fernando Plant Materials Center, before it was released for standard use in 1949. 'Cucamonga' proved to be a very successful, annual cover crop for Southern California vineyards. In 1950, further plot testing was done by the Pleasanton Plant Materials Center to see if this cultivar could extend northward into the

Mediterranean climate zone of California. Drill-width plots at the Sunol, King City and Temacula Field Evaluations Plantings showed promise for this cultivar as a reliable covercrop in orchards and vineyards in Central and Northern California. Final large-scale testing was initiated in 1959 to compare 'Cucamonga' with other annual grass cover crops including 'Blando' brome and 'Wimmera' ryegrass. Field plantings were conducted in 12 counties in Southern California, the Sierra Nevada foothills, the Central Coast and Coastal Valleys. 'Cucamonga' rated superior in rate of early growth, earliness of seed formation and drought tolerance in comparison to the other cover crop species.

Conservation Uses

'Cucamonga' is a very successful cover crop species for orchards and vineyards throughout California. Due to its early maturity, it does not deprive moisture from non-irrigated grapes. It also provides early protection from wind and water erosion in the winter. Good stands of 'Cucamonga' can prevent a troublesome establishment of weeds and late maturing grasses. Its use is recommended as quick cover for earth-fill dams and for restoration after fire. For planting after a brush burn, the recommended seeding rate is 8 pounds per acre. 'Cucamonga' matures approximately three weeks earlier than conventional cover crop species including 'Blando' brome and 'Wimmera' ryegrass. 'Cucamonga' is also extremely valuable for revegetation in highly disturbed areas including rangeland sites, brush burn areas and roadsides.

Area of Adaptation and Use

'Cucamonga' is best adapted to medium to coarse – textured soils within a pH range of 5.5 to 7, where the mean annual precipitation is around 8 inches. It is very tolerant of low soil fertility, but also responds well to fertile soils. Plantings of 'Cucamonga' at elevations of 3,200 feet in Mariposa and San Diego counties have been extremely successful. It is hypothesized this cultivar would be successful up to 5,000 feet in Southern California, 4,000 feet in Central California and 3,000 feet in Northern California.

Establishment and Management for Conservation Plantings

'Cucamonga' brome is most successful when seeded in the fall prior to the first rainfall. Drilling is the best method of planting. Mixing the seed with rice hulls is recommended to obtain a light seeding rate with even distribution. 10 lbs of seeds should be mixed with approximately 5 lbs of rice hull for best results. Seeds should be planted at a depth of 1½ in. Mulching after

seeding will provide protection from wind erosion. In a vineyard, grape pulp is often used as mulch. When soil fertility is low, plantings should be supplemented with fertilizer. A minimum of 30 lbs of N and 20 pounds of P₂O₅ is recommended for 1 acre of 'Cucamonga' brome. Phosphorus is especially important for stimulating grass growth in the winter months. Fertilizer is most effective when applied each year in the fall before the rain begins.

Broadcasting the seed is another method of planting. When planting this covercrop in a vineyard setting, it is important to broadcast the seed before the grapes are picked. This way, the grass seeds will be trampled into the soil during the picking process. When broadcasting seed on road banks, better seedling establishment occurs if the road banks are harrowed prior to seeding. In burned areas, the grass seeds can be broadcast into the ash.

After a successful planting, there are several practices to insure a healthy reestablishment of the 'Cucamonga' cover crop for subsequent years. Sub-surface tillage with a single-shape V blade when the grass is in the soft dough developmental stage will help assure survival of this cultivar. Another method of maintaining this covercrop in step orchards is cultivation in cross-slope strips. This method allows alternate strips of the grass to mature each year.

Because of its early establishment and short green feed period 'Cucamonga' brome does not have good forage value.

Ecological Considerations

The only known disease to have an impact on 'Cucamonga brome' is head smut. Head smut can be easily controlled by treating the seed with fungicide approximately 3 to 4 days before planting.

Seed and Plant Production

The recommended seeding rate of 'Cucamonga' California brome is 10 lb per acre. The seed can be

harvested by combine, the average seed yield per acre is 800 pounds.

Availability

For conservation use: 'Cucamonga' California brome is available at many different seed companies in California, Oregon, and Washington in both small and large quantities.

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

For more information, contact:
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<http://plant-materials.nrcs.usda.gov/CAPMC>

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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>>

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