Climatic Zones for TURFGRASS *in California*

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Climatic adaptability should be one of the major considerations in selecting grass for the home lawn. Although grasses are very adaptable and can endure in a wide range of climates, use of the climate zone maps to select a naturally adapted "cool season" grass for the temperate zone or a "warm season" grass for the subtropical zone will offer more lasting satisfaction.

HOME LAWNS are planted with the expectation that they will endure for years. A grass that fails to persist at least five years with ordinary care cannot be considered well adapted to the climate. Grasses used for home lawns can be divided into two broad groups: *temperate zone* or "cool season" grasses, and *subtropical zone* or "warm season" grasses.

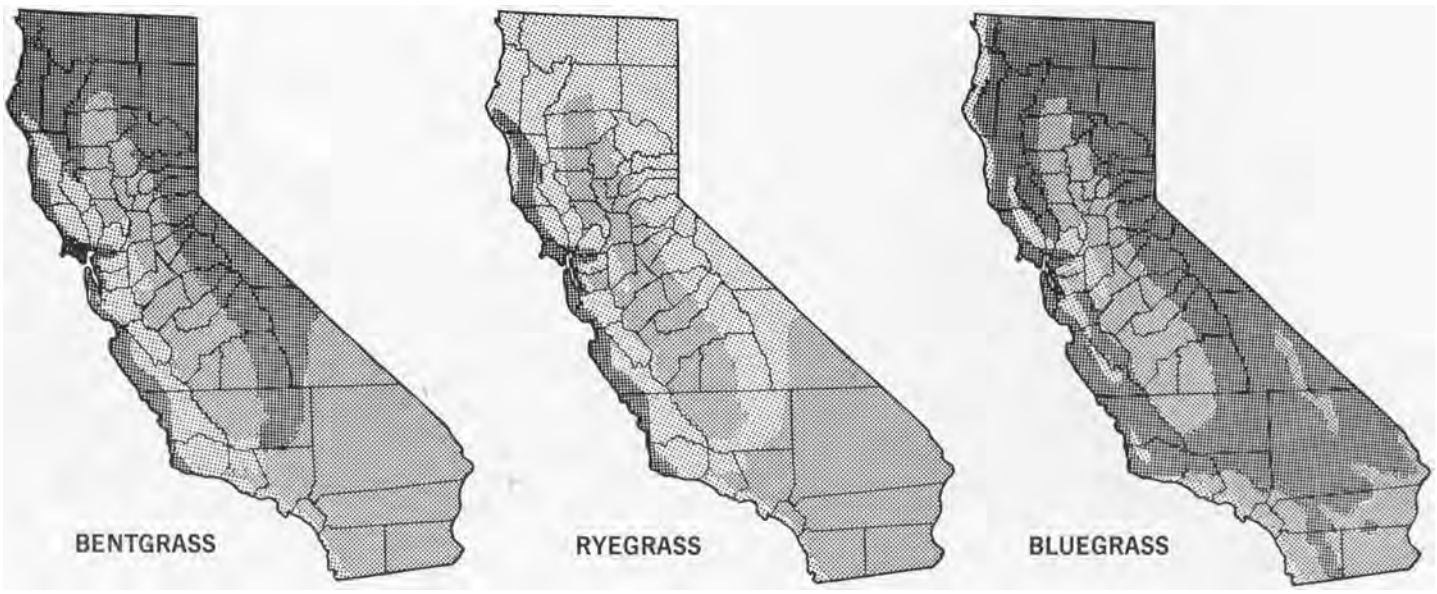
Common lawn grasses included in the temperate zone group are bentgrasses, bluegrasses, fescues, and ryegrasses. These grasses prefer an environment that is relatively cool and at no time continuously hot night and day. Some temperate zone grasses have considerable adaptability. Bluegrass, for example, will do surprisingly well in warm areas, providing nights are cool. Other grasses, however, are more exacting in their requirements.

Subtropical grasses usually grow best in warm hot climates, but some from the high altitude tropics prefer a mild, even climate. The best known subtropical grasses have a dormant season in winter, and include bermudagrass, zoysiagrass, and St. Augustine grass.

The exceedingly varied climates of California, ranging from arid subtropical to subalpine, can be broadly grouped into three subdivisions from the standpoint of turfgrass adaptability. The grouping delineates areas where the climate favors grasses of the temperate zone type or of the subtropical type. Transitional areas where either kind of grass can be maintained by careful management are also indicated on the accompanying map.

Zone map

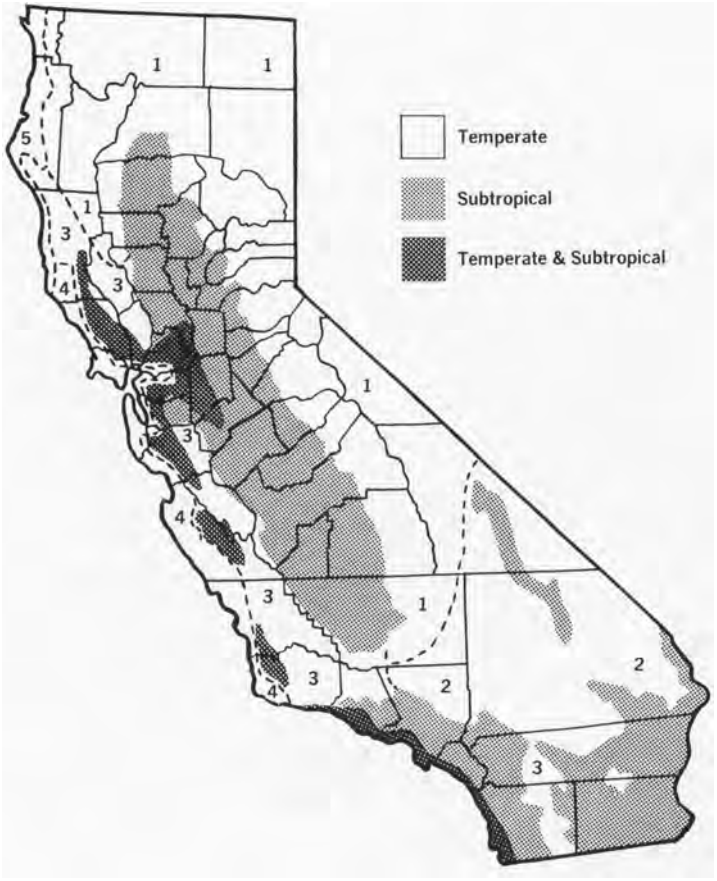
As indicated on the map, the area of best adaptability for temperate zone grasses extends from the Oregon border to the high mountains at the Mexican border. The area best suited to subtropical grasses includes the lower elevations from the Mexican border to the north end of the Sacramento Valley near Redding. The critical elevation between the subtropical and the temperate zone grass areas gradually rises from about 1,500 feet to 2,000 feet at latitude 40° 45′ north of Redding to approximately 4,000 feet on the west slopes at latitude 31° 30′ south of Julian—a distance of 650 miles.



BENTGRASS—Naturally adapted to cool, moist, north coast.

RYEGRASS—Thrives in coastal winter climate. Survives summer in the cooler areas.

BLUEGRASS—The standard, can be grown where nights are cool, but mild winters may allow carry-over of diseases and pests.



Mostly subtropical

Most California residents live in areas where subtropical grasses are best adapted. By learning to manage one of the adapted species, home owners can have a green turf the greater portion of the year and save money and effort otherwise required to fight a continual and losing battle to maintain poorly adapted grasses. With proper management and overseeding in late summer, bermudagrass can present a green surface at least 11 months of the year in the entire subtropical grass area. In areas favoring temperate zone grasses, a cool season grass will give better performance.

Dichondra will grow in all of the subtropical and transitional areas with the exception of the low-elevation deserts in the extreme southeastern portion of the state— the Coachella, Imperial and Colorado River valleys. There, it will survive only in partial shade. Dichondra is moderately suited to subclimate 4 of the temperate zone grass area.

As the turfgrass distribution map indicates, it is impossible to discuss grasses (or, for that matter, any other crop) from the standpoint of "northern" California or "southern" California. Crop adaptation must be discussed in accordance with the climatic zones.

Eight of the grasses grown for turf in California have been selected to illustrate the use of the turfgrass climate zones. The subtropical grasses are: bermudagrass; St. Augustine grass; zoysiagrass; and a ground cover, dichondra, which is a low spreading, broadleafed plant used to a considerable extent for home lawns. The temperate zone grasses are: tall fescue (*alta fescue*); bentgrass; bluegrass, and perennial ryegrass.

Adaptability ratings

Grasses are very adaptable and can endure in a wide range of climates. The small maps included here show the geographical areas of special climatic adaptability for these seven grasses and dichondra. Four ratings are given:

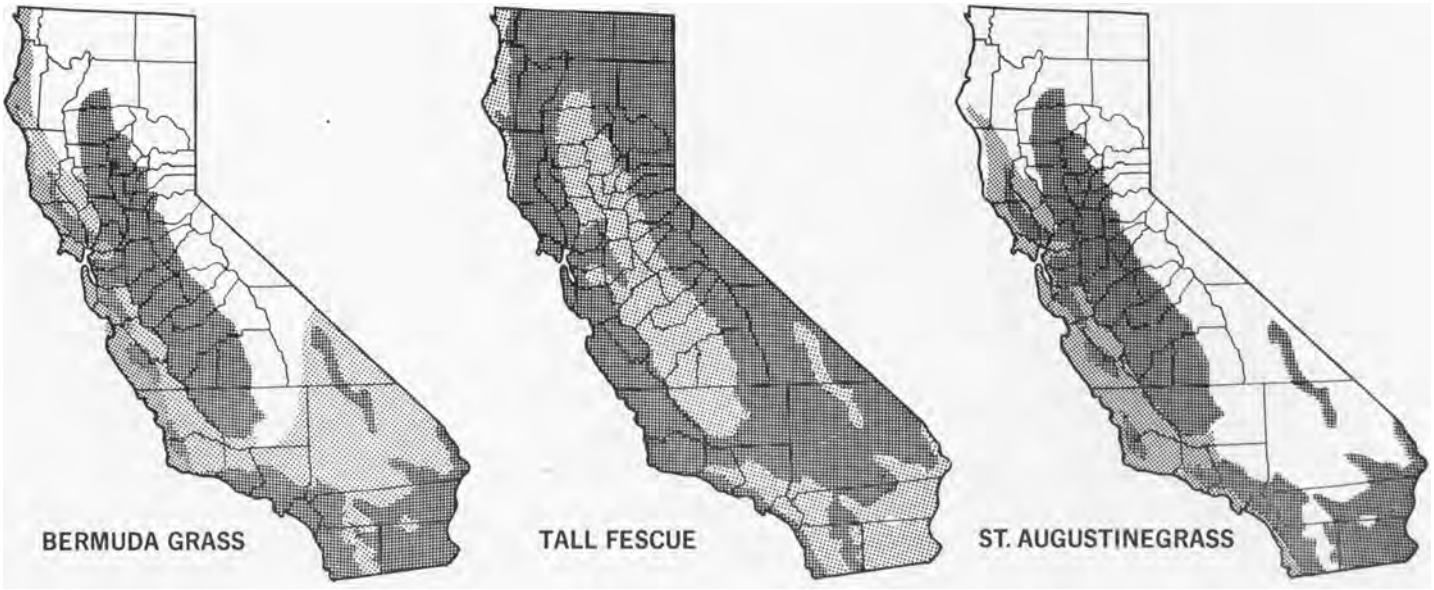
Well adapted grasses will perform satisfactorily with the maintenance normally required by the grass species.

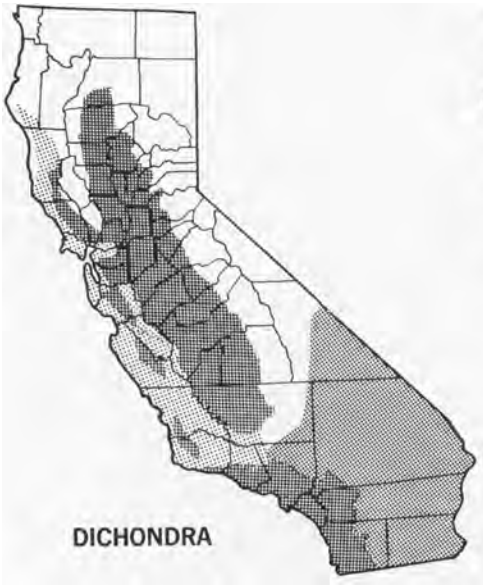
Adaptable with higher maintenance

BERMUDA—Dense subtropical sod-forming grass. Makes a beautiful summer lawn, which is overseeded for winter beauty.

TALL FESCUE—Somewhat coarse, but a tough, deep-rooted grass with few problems.

ST. AUGUSTINE—A coarse, shade-tolerant grass well suited to hot climates.





DICHONDRA—A successful ground cover in warm areas in clean soils free of weeds.

ZOYSIA—Forms a dense, emerald green carpet, somewhat shade tolerant and requiring heat for good growth.

rating includes grasses that will require more skillful and persistent maintenance to overcome the effects of climate on growth.

Better adaptable grass available rating indicates weak growth permitting invasion of more adaptable grasses and weeds. These lawns tend to deteriorate unless expert maintenance is practiced.

Not adaptable rating indicates the grass will not survive.

The turfgrass maps provide a guide in selecting the grass for a home lawn. Small areas exist within all of these principal climatic zones where micro-climates may alter selections. All climatic boundaries must be considered somewhat flexible. Home owners may obtain greatest satisfaction by selecting grasses climatically adapted to their areas, and learning how to manage them.

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G. M. SPURLOCK

MEAT-TYPE LAMBS

—goal of proposed sheep improvement association

All California breeders of purebred sheep are invited to study this program aimed at the production of meat-type lambs and to express their interest to the author—positive or negative—with suggestions for improvement. Meetings can be arranged with breeder groups to discuss details. If the plan is found feasible, assistance can be obtained in helping to set up a California sheep improvement association.

STUDIES OF ECONOMIC problems in the sheep business indicate two principal needs of the industry are: (1) to increase efficiency in production and marketing of wool and lamb, and (2) to encourage research on carcass quality of lamb and the application of usable results to live animal management and selection. The slaughter lamb of the future must be a meat-type lamb.

Milk lamb producers can market lambs at convenient weights (90 to 105 lbs), with a reasonable amount of finish (choice grade) and at a relatively early age (four to five months preferred) while still gaining well. But to accomplish this, it is necessary to "top out" the rapid-gaining, early-finishing lambs that should go to market early. Too many lambs are coming to market overweight, overfat, and overage. Some have been held too long and have lost their "bloom." This situation results from pasturing on overmature forage that has lost its succulence and where burrs and seeds cause discomfort and weight loss to the lambs. Buyers say such lambs are "dried out" and object that these will not grade or yield well, simply because they have been held too long.

Lightweight animals that are thin or in good condition and simply need more time to grow and finish are excellent for longer term feeding. However, California feeders more commonly prefer to buy rather heavy feeders (80 to 85 lb class) with a good or high-good live slaughter finish. With good feed and care these lambs finish quickly. If large-framed but thin lambs of relatively heavy weights (low-good or lower and 80 to 90 lb weight), are fed out to choice grade, the result is overweight lambs which tend to damage the lamb market. Price discrimination and the longer feeding period will usually mean a loss of money.

This type of lamb might well go to slaughter at medium to high-good slaughter grade when the carcass will be lower in fat content and less mature. The effort should be to market fed lambs at not over eight to nine months of age. Lambs in the 10 to 12 month age range are heavier in weight. Since carcass grading standards require more feathering for choice grade in more mature carcasses, these lambs also average higher in carcass fat content. Recent studies have indicated little or no difference, however, in palatability of the edible meat of such carcasses.