

PART III

Plants



Grasses

Grasses are perennials with particular characteristics. They are monocots that have hollow stems, leaves that sheath, and flowers that are wind-pollinated. Grasses spread by seed, rhizomes (underground stems), stolons (above ground stems), and by clumping and expanding. Grasses can be spilt into two categories: cool and warm season.

Cool season grasses mostly come from mild winter areas, such as Southern California. They begin their growth with fall rains and usually go dormant in mid to late summer. While they like the soil dry in late summer and fall, they favor only slightly dry soil between winter and spring. Most can tolerate summer water, and may stay greener as a consequence, but they will rot if they get too much irrigation. Plant, divide and cut back these cool season growers between October and December.



Summer dormant, and winter and spring growing, red fescue is a cool season grass.

Warm season grasses mostly come from cold winter areas. They are winter dormant and wake up in spring, growing throughout summer. Between summer and fall, they should dry out only slightly between waterings, but winter through spring they require no irrigation. Plant, divide and cut back between January and March.



Winter dormant, and spring and summer growing, deer grass is a warm season grass.

General Growing Tips

Below are general guidelines for growing grasses and includes information on irrigation, fertilization, pruning and propagation. Following this section are specific recommendations for individual grasses.

Irrigation / Water Requirements

Generally, grasses are not the most drought tolerant plants. The showy, lush and big grasses that are sold at nurseries do not come from the deserts, but from the grasslands, plains, riparian, wetland and woodland environments, some of the least drought-stressed environments. The grasses listed below are at least semi-drought adapted. The more water-needy grasses, such as bog, moor and reed grasses, have been excluded for the most part.

Fertilizing / Fertilization

Most of the grasses sold at nurseries come from biologically rich areas with biologically complex soils. They favor fertile soils rich in both bacterial and fungal life. Mulch, compost and humus are all that is typically needed to keep them thriving. Some varieties, especially the larger grasses such as evergreen miscanthus, will require organic supplements high in nitrogen, such as manures and blood meal. However, a few of the grasses listed below are true savannah and scrub grasses and have adapted to poor, hardpan soils. Anything more than wood chips and mulch will hurt them. The needle grasses, melics and dropseed are good examples.

Pruning

Most grasses have adapted to some type of regular disturbance, whether flooding, grazing or wildfires. Therefore many grasses perform better with moderate levels of induced disturbance, whether that be mowing or shearing.

Mowing and shearing perennial grasses can be a grueling chore because leaves are fibrous and difficult to cut. The best tools are weed-whackers, hedge shears (not the powered trimmers) and hand pruning shears. Weed-whacking the larger grasses may require upgrading to a thicker string, or replacing string with a plastic or metal blade. Sharp blades are essential—using blunt blades is an exercise in futility.



Many ornamental grasses look better with periodic shearing. The *Carex tumulicola* pictured is cut back every other to every third year, keeping it green and flush with growth.

Propagation: Divisions

Clumping grasses produce new growth from their base and grow outward. They are easily divided and propagated. Commonly divided grasses include blue oat grass, deer grass, miscanthus and lyme grass.

As a Rule

1. If cool season, then begin division in late fall/early winter; if warm season, then begin late winter/early spring.
2. Start in cool weather.
3. Moisten soil to 1' deep: do not over saturate.
4. Dig up plants starting 4" to 6" from the plant's base.
5. If not dividing immediately, moisten, cover and shade the roots.
6. Cut the clump in halves or thirds using a sharp knife or pruning saw.
7. Plant the divisions immediately.
8. Moisten the soil to 1' deep.
9. If drainage is good, moisten soil up to twice a week; if not, no more than once a week.
10. Put on normal irrigation schedule in 4 weeks.



A clump of lemon grass (*Cymbopogon citratus*) dug up and cut in half.

Pests

Although grasses are one of the most problem-free plant palettes, they are not always pest-free. Aphids, gophers, mealybugs, rabbits, rot, rust, slugs, and snails are potential problems. Refer to the chapter on Natural Strategies for specifics on handling these pests. However, the best defense is always a strong offense:

Maintain Health for Pest Protection

- Do not overwater.
- Provide or ensure good drainage.
- Do not cut back out of season—it can take plants years to recover.
- Do not cut back too frequently; every other year is better than every year.
- Fertilize sparingly, relying mostly on wood chips, mulches and compost.
- Ensure air circulation.

Individual Plant Care

Grasses are usually known by their common names and that is how they are listed below. At the end of this chapter is a list of botanical names, and their common name equivalents.

Note: *Irrigation requirements are expressed in the amount of inches a soil should dry to before receiving supplemental water. Of course, if a soil never dries to prescribed depth, which is not uncommon, then the plant requires no irrigation.* ■

Alkali Sacaton or Dropseed (*Sporobolus airoides*)

Warm season. Southern California native. Tough. Can dry to 6" in spring and summer, to 1' in fall and winter. Dry to only 4" in spring in well draining soils. Suffers in wet, compacted soils. Prefers neutral to slightly alkaline soils. Low nutrient needs; yearly mulch only. Slow grower; no cutting or mowing is necessary.

Big bluestem (*Andropogon gerardii*)

Warm season. Tough. Can dry to 4". Needs no more than mulch and compost, although occasional organic supplements high in nitrogen may improve appearance. If rangy, mow to a couple of inches in winter (no later!). Divide and plant in winter. Corral where spreading rhizomes could be a problem. Does not tolerate shade.

Blue-eyed grass (*Sisyrinchium bellum*)

Refer to the section on Low Growing and Rooting Perennials in the Perennial chapter.

Blue grama (*Bouteloua gracilis*)

Warm season. This grass is drought adapted and with roots that grow to 2' it can dry to 6" to 9". If rangy or listless, mow to ground in fall. Low nutrient needs; a little mulch and bare soil are all that it needs. If walked on, then aeration may be required. May need corraling. Its seeds are slow to spread, which means being careful not to trample seedlings.

Blue oat grass (*Helictotrichon sempervirens*)

Cool season. Along the coast, in the shade, and in cool environments let the soil dry to 6", in hot dry areas to 4". Suffers from rot and rust in wet soils or humid environments. Moderate feeder that needs compost, humus, and occasional well-balanced organic fertilizer. If untidy, mow to 3" in fall. Plant in fall and early winter.

Buffalo grass (*Buchloe dactyloides*)

Warm season. Tough lawn substitute. Can dry to 4". Low nutrient needs; mulches and compost are sufficient. Occasionally requires aeration. Can be treated as a lawn replacement and mowed but is rarely mowed when used as a meadow grass. It runs and may need corraling. Slow to establish and fertilizers won't help.

Bunch cutgrass (*Leersia monandra*)

Cool season. Dry to 2" in sun, 6" in shade. Prefers neutral pH and low nutrients; mulch and compost are all that are necessary. The grass can be mowed to improve appearance in fall. Plant in fall and winter.

California oatgrass (*Danthonia californica*)

Cool season. A Southern California native. Dry to no more than 4" in spring and fall, but can tolerate up to 6" in summer (although it stays green with regular summer irrigation). Nutrients needs are moderately low; mulch and compost are sufficient. Can reseed and regenerate. If untidy, mow in fall. Plant or sow in late fall, early winter.

Cane bluestem (*Bothriochloa barbinodis*)

Warm season. Southern California native. Tough. Along the coast dries to 6" in winter and spring, and up to 9" in summer and fall. Inland it dries to 6" year round. Low nutrient needs; nothing more than a light layer of wood chips or mulch is needed. Deadhead late fall. If looking rangy or tired, mow to 4" in late winter/early spring. Plant in winter and spring.

Deer grass (*Muhlenbergia rigens*)

Warm season. Southern California native found in protected or moist locations. For best appearance dry to 4" in spring and 6" in summer and fall. No irrigation in winter. Low nutrient needs; mulch and compost will do. Deadhead in early winter. If rangy or tired looking, cut back to 6" late fall to early spring. Divide and plant in winter and spring.

Evergreen miscanthus (*Miscanthus transmorrisonensis*)

Warm season. While it is hardy and dries to 6" year round, because of the size of this grass, the soil around it tends to dry out quickly. Therefore it will need more frequent irrigation. Preferring fertile soils, it requires mulch or compost plus organic supplements high in nitrogen. Remove dead leaves and deadhead in winter. Divide and plant in late winter/early spring.

Fescue, blue (*Festuca glauca*)

Cool season. Likes to be moderately dry between waterings. Dry to 3" inland and 6" along the coast. Not big feeders; mulches and compost are sufficient. Deadhead late summer if desired. Rarely needs cutting back. The centers will begin to die in older clumps and replanting will be necessary. They are prone to rot in hot and humid environments.

Fescue, California (*Festuca californica*)

Cool season. California native. Dry to 4" in full sun in winter and spring, 6" to 9" in summer and fall. Right along the coast and in the shade dry to 6" in winter and spring, and give no irrigation the rest of the year. Moderately low nutrients requirements; mulch or compost will suffice. Deadhead late summer. If untidy, them either rake out dead leaves or cut two-thirds off the top in late fall. Plant in late fall and winter.

Fescue, creeping red (*Festuca rubra*)

Cool season. California native. If in a cool coastal or shaded area, dry to 4" to 6", but if inland and hot, then dry to only 3". Will suffer with too much water. Prefers slightly acidic soils with low to moderate nutrients, rarely needing more than a dose of blood meal in fall. It spreads by rhizomes, but seldom needs corraling. Rake out dead material between late fall and late winter.

Fountain grass, Bunny tail (*Pennisetum mesasiaticum* 'Bunny Tails')

Warm season. Dry to 4" year round for best appearance. Prefers fertile soils; yearly compost should do, although a well-balanced organic fertilizer may be needed occasionally. Deadhead in late fall. If rangy looking, cut to 4" in early spring. Plant in winter and spring.

Fountain grass, red (*Pennisetum x advena* 'Rubrum')

Warm season. Dry adapted and looks good year round if soil dries to 4" to 6", depending on distance from coast. Too much water creates leggy, lanky growth. Moderate nutrients needs; nothing more than mulch, compost or humus is needed. Deadhead early fall. Divide if necessary in late winter. Mow grass to 4"-6" early spring if looking untidy. Can rot in wet, compacted soils.

Hairgrass (*Deschampsia* spp.)

Cool season. Only moderately drought tolerant. Dry to 3" in sun, to 5" in the shade. Suffers in hot and dry situations. Prefers slightly acidic, rich soil. Moderate feeders; compost, humus and organics may be needed regularly. Divide and cut back in fall. Plant in late winter/early spring.

June grass (*Koeleria macrantha*)

Cool season. California native. Drought resilient. Prefers 6" dry year round. Low nutrient needs; mulch only. Suffer in wet and compacted conditions. Slow grower and so it should be encouraged to seed. Deadhead in early fall. Plant in late winter. It is an allergen.

Lemon grass (*Cymbopogon citratus*)

Warm season. Dry to 4" in full sun, to 6" in the shade, year round. Moderate feeder; will need organic additives if not planted in fertile soil. Divide and cut back in winter/early spring. Frost sensitive (the leaves will look burned if affected).

Melic, California (*Melica californica*)

Cool season. Southern California native. Hardy and can dry to 6" year round. Requires almost no supplemental water in shade. Low nutrient needs; wood chips or mulch are sufficient. Mow in fall if looking rangy or tired. Sow seeds in fall through winter. Will suffer in wet, compacted conditions.

Melic, coastal range (*Melica imperfecta*)

Cool season. Southern California native. Can dry to 6" year round. May need no irrigation in shade. Prefers neutral pH and low nutrients; mulch or compost only. If looking rangy, mow in fall. Sow seeds in fall and winter.

Mexican feather grass (*Stipa tenuissima* (*Nassella tenuissima*))

Cool Season. Mexican feather grass is an aggressive invasive plant and it should not be planted. It easily self-sows and mowing the top 6" in late spring before the grass sets seed will help control its spread.

Muhly, bamboo (*Muhlenbergia dumosa*)

Warm season. Drought tolerant and can dry 4" to 6" in summer, although it is more attractive if soils only dry to 2" winter and spring. Prefers fertile soils; mulch, compost or humus with occasional organic additives may be required. Remove dead stems, deadhead and thin in early winter. Divide and plant in late winter/early spring.

Muhly, pink or Hairawn muhly (*Muhlenbergia capillaris*)

Warm season. Drought adapted. Dry to 4" to 6" year round, depending on distance from coast. Moderate nutrient needs; compost or humus will suffice. Deadhead in early winter. Divide and plant in late winter. Some plants will lose the pink of their blooms and have to be replaced.

Needlegrass—noddling, foothill and purple (*Stipa* (*Nassella*) *cernua*, *S. lepida*, *S. pulchra*)

Cool season. California natives. Exceptionally drought adapted. Dry to 6" fall through spring. No irrigation late summer/early fall (it is dormant). Suffers from too much water and/or compaction. Low nutrient needs; nothing more than mulch is needed. Mow in late summer/fall. Plant and seed in fall/early winter.

Purple three-awn (*Aristida purpurea*)

Warm season. Southern California native. Drought adapted. Dry to 5" or 9" year round, depending on distance from coast. Low nutrient needs; slow to decompose wood chips and mulch only. The sharp-barbed awns can be a public/pet nuisance and the seeds are fertile, meaning that it should be sheared/mowed before it sets its awns in summer. If regeneration is desired, mow it in fall.

Reed grass, Mendocino (*Calamagrostis foliosa*)

Cool season. Dry soil to 4" along the coast, only 2" inland. Low to moderate nutrient needs; mulch and compost is usually all that is needed. Deadhead in late summer. If looking untidy, then cut top one-third of grass in fall. Plant in fall.

Ruby grass (*Melinis nerviglumis*)

Warm season. Drought resilient. Dry to 4" in spring and then to 6" the rest of the year. Moderate feeder; nothing more than compost or humus is required. Deadhead in winter. Cut back to a couple inches in spring if damaged from frost. Plant in late winter/early spring.

Rye, blue or Blue lyme grass (*Leymus arenarius* 'Glaucus')

Cool season. Dry to 2" in spring and fall, to 4" in summer. Moderate feeder; nothing more than yearly compost or humus is needed. Thin, divide and plant in fall. If untidy, cut back to only a couple inches in fall. If propagating, divide in fall. Aggressive spreader in moist airy environments and will need corralling.

Rye, Canyon prince wild (*Elymus condensatus* 'Canyon Prince')

Cool season. California native. As a riparian it needs moisture spring and fall, drying to 2", but can take considerable dryness in summer, drying to 6". Moderate nutrient needs; mulch, compost and humus should do. Plant and divide in fall. Mow to a couple inches any time if looking rangy or untidy.

Rye, great basin wild (*Elymus cinereus*)

Cool season. California native. Prefers to be only slightly dry (to 2") in fall and spring but can tolerate to 6" in summer. Moderate feeder; mulch and compost will suffice, although a complete organic fertilizer will be needed if in poor coarse soil. If looking rangy, cut back to a couple inches in fall. Plant fall and winter.

Rye, wild blue (*Elymus glaucus*)

Cool season. A California native. Grows best with moisture; dry to only 3" in the sun, 4" in shade. Prefers neutral pH and a little nutrients; mulch and compost should suffice. Short lived and can reseed itself; mow after the grass has set seed.

Sedge, dune, San Diego and Berkeley (*Carex pansa*, *C. spissa*, *C. tumulicola*)

Not a grass, but a sedge. Most sedges are cool season plants and will stay green with moisture and warm temperatures. Dry to 2" or 4" for best appearance. These sedges prefer slightly acidic soils and are quick to show signs of nitrogen deficiencies, indicating they need humus or organic additives high in nitrogen. Deadhead in summer by weed whacking. If looking untidy, mow to a couple inches in late fall/early winter. Plant in winter. *C. pansa* may need corralling.

Switch grass (*Panicum virgatum*)

Warm season. Includes many cultivars. Can become drought resilient and thrive in soils dried to 6" in the summer and fall. For best appearance dry to only 2" in late spring. Deadhead in fall. Low nutrient needs; mulch and compost only. If rangy, shear to 4" to 6" in late winter/spring. Plant in late winter/ spring. Moist conditions can cause problems and the grass can send out rhizomes, self-sow and get rust in damp conditions.

Zoysia or Korean velvetgrass (*Zoysia* spp.)

Warm season. Dries to 3" throughout the year. Low nitrogen needs for a lawn alternative, but it still requires 2 to 3 pounds of nitrogen a year (per 1,000sf). Because of zoysia's dense mat-like growth, mulches and composts are more detrimental than beneficial. Organic fertilizers such as blood meal, activated sludge and distilled manures are best and need to be washed in. If looking tired, mow to 1" and apply compost and humus in late winter/early spring.

Botanical Names to Common

Andropogon gerardii Big bluestem
Aristida purpurea Purple three-awn
Bothriochloa barbinodis Cane bluestem
Bouteloua gracilis Blue grama
Buchloe dactyloides Buffalo grass
Calamagrostis foliosa Mendocino reed grass
Carex pansa *C. spissa*, *C. tumulicola* Sedge, dune, San Diego and Berkeley
Cymbopogon citratus Lemon grass
Danthonia californica California oatgrass
Deschampsia spp. Hairgrass
Elymus cinereus Great basin wild rye
Elymus condensatus 'Canyon Prince' Canyon prince wild rye
Elymus glaucus Wild Blue Rye
Festuca californica California fescue
Festuca glauca Blue fescue
Festuca rubra Creeping Red fescue
Helictotrichon sempervirens Blue oat grass
Koeleria macrantha June grass
Leersia monandra Bunch cutgrass
Leymus arenarius 'Glaucus' Blue rye or Blue lyme grass

Melica californica California melic
Melica imperfecta Coastal range melic
Melinis nerviglumis Ruby grass
Miscanthus transmorrisonensis Evergreen miscanthus
Muhlenbergia capillaris Pink muhly or Hairawn muhly
Muhlenbergia dumosa Bamboo muhly
Muhlenbergia rigens Deer grass
Panicum virgatum Switch grass
Pennisetum x advena 'Rubrum' Red fountain grass
Pennisetum messiacum 'Bunny Tails' Bunny tail fountain grass
Sporobolus airoides Alkali Sacaton or Dropseed
Stipa (*Nassella*) *cernua*, *N. lepida*, *N. pulchra* Needlegrass—nodding,
 foothill and purple
Stipa tenuissima (*Nassella tenuissima*) Mexican feather grass
Zoysia spp. Zoysia or Korean Velvetgrass

Common Names to Botanical

Alkali sacaton or Dropseed *Sporobolus airoides*
 Big bluestem *Andropogon gerardii*
 Blue grama *Bouteloua gracilis*
 Blue oat grass *Helictotrichon sempervirens*
 Buffalo grass *Buchloe dactyloides*
 Bunch cutgrass *Leersia monandra*
 California oatgrass *Danthonia californica*
 Cane bluestem *Bothriochloa barbinodis*
 Deer grass *Muhlenbergia rigens*
 Evergreen miscanthus *Miscanthus transmorrisonensis*
 Fescue, blue *Festuca glauca*
 Fescue, California *Festuca californica*
 Fescue, creeping red *Festuca rubra*
 Fountain grass, Bunny tail *Pennisetum messiacum* 'Bunny Tails'
 Fountain grass, red *Pennisetum x advena* 'Rubrum'
 Hairgrass *Deschampsia* spp.
 June grass *Koeleria macrantha*
 Lemon grass *Cymbopogon citratus*
 Melic, California *Melica californica*
 Melic, coastal range *Melica imperfecta*
 Mexican feather grass *Stipa tenuissima* (*Nassella tenuissima*)
 Muhly, bamboo *Muhlenbergia dumosa*

Muhly, pink or Hairawn muhly *Muhlenbergia capillaris*
Needlegrass—Nodding, foothill and purple *Stipa* (*Nassella*) *cernua*, *N. lepida*, *N. pulchra*
Purple three-awn *Aristida purpurea*
Reed grass, Mendocino *Calamagrostis foliosa*
Ruby grass *Melinis nerviglumis*
Rye, blue or blue lyme grass *Leymus arenarius* ‘*Glaucus*’
Rye, canyon prince wild *Elymus condensatus* ‘*Canyon Prince*’
Rye, great basin wild *Elymus cinereus*
Rye, wild blue *Elymus glaucus*
Sedge, dune, San Diego and Berkeley *Carex pansa* *C. spissa*, *C. tumulicola*
Switch grass *Panicum virgatum*
Zoysia or Korean velvetgrass *Zoysia* spp.