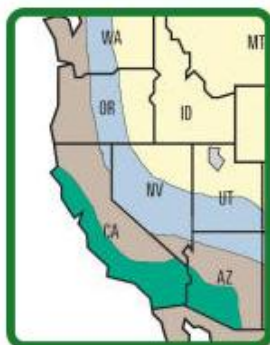


‘UC Verde’[®] Buffalograss Installation and Care Guidelines

Introduction

Buffalograss had been around for millions of years in North America, ranging from eastern Arizona to northern Mexico and through the Great Plains States.

Because of its extreme drought tolerance, turf researchers turned to Buffalograss in the 1980’s. While their first generation selections were touted as “saviors of our environment,” they proved to be weak in both density and color. Plantings of these varieties performed even worse in California’s Mediterranean climate, with very poor germination, establishment and dormancy periods of up to six months. Such experiences gave Buffalograss a bad rap in the landscape industry for a while, but these grasses were the forerunners of varieties that would be much better.



In late 2003, ‘UC Verde’[®] Buffalograss was introduced by the University of California, bred specifically for most of California and the low desert valleys, including Tucson in Arizona. This cultivar was the result of years of research at UC Davis and UC Riverside. ‘UC Verde’[®] has been shown to get by on 12” of water per year. It makes a beautiful groomed turf at 2-3” tall, or it may be grown as a short meadow grass at 6-8” in height.

The water savings is 75% versus tall fescue lawns, and 30 to 40% less than Bermuda, Zoysia and St. Augustine. The reduced mowing requirement of this grass (half that or less of fescue), disease and pest resistance, very low pollen count, and tolerance of inundation as a storm water retention/bioswale grass all make a very good argument for looking at a grass cultivar that was **bred in California for California’s unique climate.**

When to Plant

Though it is possible to plant ‘UC Verde’[®] Buffalograss year round, being a warm season grass, the optimal time for planting is between April 1st and August 15th, in order to take full advantage of the warmer night and day temperatures, and longer days experienced at this time of year for rapid establishment.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
*		OK	BEST					OK		*	

*Can be planted at this time but growth will be slowed. Please inquire for special instructions for planting these months

Product Description



'UC Verde'® Buffalograss is supplied in plug trays of 128 plugs per tray (plugs are 1 ¼" wide x 1 ¾" deep)

Plugs may be received prior to installation date. Immediately open boxes. Place trays in a single layer in an area protected from wind. Water to moisten plugs. **Keep plugs moist at all times and in their plug trays until planting.**

Determining How Many Plugs

To calculate the number of plugs needed, measure the area to be installed with 'UC Verde'® and use the following formulas for appropriate plug spacing.

Spacing in Inches	Multiply sq. ft by
18	0.44
15	0.64
12	1.00
9	1.78
6	4.00

(ex: plugs placed at 15 inch centers in an area of 10,000 sq ft – 10,000X.64= 6,400 plugs)

Note: for most of California, 12" on center (o.c.) is appropriate spacing for residential planting, unless fast fill-in is desired, in which case 9" is recommended. For large projects like parks, 15" o.c. is okay but fill in time will be 4-8 weeks longer.

Rate of fill-in is a direct function of spacing and time of planting. If planting during optimal growing time at recommended spacing you should have full coverage in 12-14 weeks in inland areas, slightly longer in coastal regions.



Site Preparation

New Lawns: All areas to be plugged should be free of construction debris, stones, living vegetation etc. If large weed population is expected, a pre-emergent herbicide like Ronstar can be surface applied after planting (DO NOT SOIL INCORPORATE). All grades shall be established and maintained in accordance with drawings and/or applicable specifications.

Renovated Lawns: For lawn conversions involving a healthy COOL SEASON grass like tall fescue, the old lawn may be removed with a sod cutter, or may be killed with a non-selective herbicide such as Round-Up, following label instructions. **NOTE: IF PRIOR LAWN HAS BERMUDA, KIKUYU OR ANY OTHER RHIZOTOMOUS GRASS, DO NOT PLANT PLUGS WITHOUT PROPERLY GETTING RID OF THESE VERY INVASIVE GRASSES!** We recommend a ‘triple grow-kill cycle’ for these, where application of non-selective herbicide is followed by a period of watering the area in to promote new growth; repeated 2- 3 times to ensure eradication of the persistent rhizomes. This process may take long but is worth it!

Planting

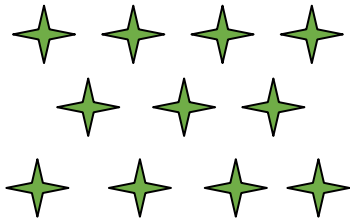
Make sure that plugs are well-watered before planting. If plugs are dry, hand water or soak the plug tray in a large container or sink.



A soil with tilled or loose to depth of 4” is easily planted by hand; harder soils may benefit from use of a soil auger to make holes for planting.

Start next to a sidewalk, building, etc. Dig or drill a 1 ¼” diameter hole about 1 ½” –inches deep. Place a plug into the hole, being sure the plug is to the bottom of the hole. **Failure to place plug firmly to the bottom of hole will create an air pocket under the plug, which will reduce the chance for survival.**

Planting plugs too high (above soil level) may lead plugs to air wick dry which can also lead to plant loss. The top of the plug soil should be slightly below ground surface. Measure for the next plug, using the specified spacing. Repeat installation procedure. Continue in a straight line to the end of the planting area. Move the specified spacing for the second row and continue and continue planting. Stagger plugs as on diagram :



Irrigation

Once established 'UC Verde'® has extremely low irrigation needs. New plantings will however require frequent light irrigations to prevent plugs from drying out. Depending on time of planting, soil type and weather, plugs may need to be watered daily and in very hot weather maybe more often for the first 3-4 weeks.

Water-in plugs thoroughly after planting. Maintain area by keeping plugs and soil moist for approximately 21 days. Avoid extremes of letting the plugs go bone dry or keeping them boggy. After this period, slowly reduce the frequency of watering.

During the growing in period, plugs require adequate moisture to allow the stolons to root into the ground. If stolons do not attach to the ground, water lighter amounts with increased frequency and add ¼" lawn topper to help retain surface moisture. Once complete coverage is achieved, water to prevent stress. Watering frequency and amounts will vary with soil type, clay soils requiring less water and sandy soils requiring more frequent watering.

Once filled in, switching watering schedule to infrequent but deep irrigations to drive the roots deeper and increase drought tolerance. In most areas and for most soil types, and established 'UC Verde'® lawn can get by on one deep irrigation every 7-10 days.

Note: If soil surface is drying out quickly between irrigations during lawn fill in period, the addition of a fine lawn topper (compost) at planting will enhance surface moisture and allow for faster rooting and spread of stolons . Apply no more than ¼" of topper.

Fertilization

Fill in time can be reduced by providing an initial feeding for the plugs following the first irrigation with a liquid feed, such as Miracle Gro 15-30-15 or similar product.

Monthly fertilization will speed up coverage/fill in time by the plugs and stolons. At time of installation, in addition to starter fertilizer, apply a high quality slow release lawn fertilizer at one pound of Nitrogen (N) per 1000sq ft. Re-apply every 30 days during the growing season until the complete grass coverage is achieved. Water in, well.

For established 'UC Verde'® lawns, apply 2-3 lbs of Nitrogen per 1000 square feet annually. This is best divided into 5 fertilizations during the growing season: late February, mid-April, late May, mid-July, early September.

Weed Control

After the initial watering, an appropriate pre-emergent herbicide labeled for use of Buffalograss (Buchloe sp.) may be applied to control weeds during "grow-in" period. Follow label instructions. After application, thoroughly water the area. Pre-emergent treatment may be repeated if needed within 8 weeks, follow product label. If broadleaf weeds develop, apply a non 2-4D broadleaf herbicide. Ready to spray products that attach to garden hose are easy to use; find a product that is labeled for use on Buffalograss (Buchloe sp.)

Pests and Disease

Rabbits may be attracted to the fresh growth of the young plants and can chew the plugs down to a nub, so best keep them away for the first 4-6 weeks with fencing. If this is not practical, note that the 'UC Verde'® can be planted slightly deeper, placing the crown of the plant one quarter to half an inch or so below soil level. By doing so, rabbits may graze but will not harm crown of plant. Sprinkling sand on the new plugs may also deter rabbits from chewing.

Crows may be attracted to the newly planted area and have fun pulling up recently planted plugs. If noise does not deter them we have seen some success with motion activated sprinklers such as Scarecrow Motion Activated Sprinkler, Orbit Yard Enforcer, Havahart Spray Away, etc.

Mowing

Initial mowing should be approximately 3- 4 weeks after planting, once plugs have rooted in. This will promote stolon growth and fill in time. Do not remove more than 1/3" of top growth to avoid scalping the lawn. Subsequent mowing schedule should be about half that of a fescue lawn for a groomed look. For a short meadow look, do not mow regularly, but just one to two times during the growing season (April-October) to invigorate the lawn. (NOTE: If your mower or that of your gardener has been used on other lawns, especially lawns with Bermuda or Kikuyu, make sure that the mower housing and blades are clean and free of these clippings; these grasses are considered invasive and the cut sections can become established in your new lawn.)



'UC Verde'® mowed, manicured look

'UC Verde'® un-mowed, meadow look



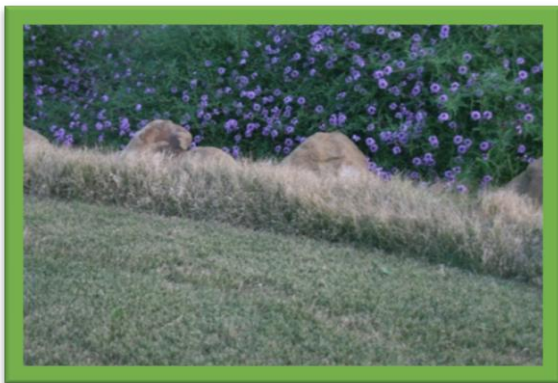
Winter Dormancy

'UC Verde'[®] buffalograss is a warm season turfgrass, and will naturally slowdown in growth during winter: it does not go fully dormant, but semi-dormant. Depending upon location (coastal vs. inland), grass color will begin to change about December 1st from green to a straw-green color; the colder the nights the more straw coloring. Except for colder inland regions 'UC Verde' does not go blonde-dormant. 'UC Verde'[®] comes out of dormancy about 4 weeks earlier than Bermuda grass.

DO NOT WORRY about semi-dormancy! While this is the natural rest cycle for this grass, you do have options that will even allow for a green lawn year-round, as noted on the following page:

- 1) Accept the fact that this is the normal cycle for a warm season grass; look upon this semi-dormancy as it is in much of the rest of the country: a natural a change of seasons (and a chance to take a break from lawn maintenance and save water!).
- 2) Reduce the semi-dormancy period by mowing to 1" height mid-November and a light feeding with a balanced, slow-release fertilizer. Follow up in early February, with an application of a high nitrogen lawn fertilizer. Always apply fertilizers to well-watered lawns and water-in thoroughly immediately after application. This practice will shorten semi-dormancy period by 4 weeks, typically.
- 3) Over-seed with annual rye-grass where summer weather gets hot (inland areas), a native grass (i.e. vulpia) for the cooler, coastal areas. This over-seeding should be done in November for quick winter color; these grasses will naturally die down in early spring, when 'UC Verde' overtakes it. NOTE: Ryegrass is not recommended for over-seeding unless in areas where summer temperatures regularly exceed 85 - 90F.
- 4) Over-seed with California native wild-flowers in November, for green foliage color in winter followed by beautiful wild-flowers in early spring throughout the 'UC Verde' lawn.
- 5) Apply a turf-colorant in mid to late November. The colorant adheres best if applied just before lawn starts goes into semi-dormancy. It will last about 3 months, and will actually help bring the 'UC Verde' into new growth faster. There are some very good organic turf colorants on the market that are very close in color to 'UC Verde' when applied at proper dilutions.

For further specifics on turf colorant recommendations and over-seeding plant selections, contact our office.



'UC Verde'[®] Winter dormancy look



'UC Verde'[®] Winter dormancy look

Seasonal Tips

SPRING

- **MOW** your 'UC Verde'® to 1-1 ½" , this will remove the old grass debris, warm the soil and encourage new stolon growth. You should do this even if you intend on having your 'UC Verde'® as a short meadow, this process invigorates the lawn.
- **WEED!** Hand weeding at this time of year is fairly easy as soil is moist and weeds easy to spot. If your area is large, apply a pre-emergent with crabgrass and/or annual grassy weed control. (**READ AND FOLLOW PRODUCT LABEL!**) Weeding should be attended to BEFORE fertilizing as you do not want to also feed your weeds.
- **FERTILIZE!** 'UC Verde'® is a warm season grass, and will respond very well to fertilization as the night and day temperatures warm up. Make sure to use a lawn food with a high nitrogen analysis, such as 36-0-6 (N-P-K); this may be in liquid form (eg. MiracleGro or something similar), or a granular fertilizer.

As compared with all other turfgrasses, 'UC Verde'® has a very low fertilizer requirement at just 2 to 3 lbs. of nitrogen per 1,000 square feet per year. This is just 1/5th the amount (or less) that the typical application rate for tall fescue lawns, like 'Marathon', so besides saving a lot of water, you are also using much less fertilizer with your 'UC Verde' lawn.

Do not apply all of this fertilizer in one application! It is best to take this annual total and divide it into 5 separate applications, for optimal color and lawn performance. Exact application dates are not important, but you should try to follow something similar to this schedule:

Late February - Apply ½ to ¾ lb. N per 1,000 square feet. Do not apply to a bone-dry lawn, but one that has some soil moisture. If a granular fertilizer, make sure that you broadcast evenly and water-in very well following application.

Mid-April – Repeat.

Late-May – Repeat.

Mid-July – Repeat.

Early September – Repeat.

SUMMER

This is the time to enjoy your 'UC Verde'®, it is actively growing and at its best during the warm summer months.

- **Fertilize** per above recommendations.
- If the **weeds** got away from you, any broad leaf weeds can be treated with a chemical application. (NOTE: DO NOT use any product that contains 2-4 D during hot temperatures, this may stunt the grass).
- **Mow** to your desired height or enjoy as a meadow grass.
- **Irrigate** an established lawn deeply, once every 7-10 days. A younger lawn may require more frequency, and deep watering are best. If you just planted your plugs see IRRIGATION above.

FALL

- Fall maintenance should be minimal. Water as needed. Control weeds as needed.

WINTER

- See Winter Semi- Dormancy above

UC VERDE® PLUGS
Buffalograss

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- phone: 949 498 1131 - fax: 949 498 1196 - www.UCVerdePlugs.com -
- mail@florasourceltd.com -