



A Turfgrass Maintenance Guide for Residential and Commercial Lawns in the Low Elevation Arizona Desert

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Homeowners commonly desire to have a functional lawn for children to play upon and for their pets. Lawns also contribute to the aesthetics and value of residential or commercial properties as well as offering many environmental advantages. The right-sized lawn in the right place with an efficient irrigation system can provide all of these benefits.

Common and hybrid bermudagrasses

In the low desert of Arizona around Phoenix, Tucson, Casa Grande, and Yuma, bermudagrass is the best adapted turfgrass for the heat and its water requirements. Common bermudagrass (*Cynodon dactylon*) can be grown from seed or planted vegetatively as sod, plugs, or sprigs. It will shed pollen and make seeds. Hybrid bermudagrasses are sterile and do not shed pollen even though seedheads are produced. The hybrids are a cross between common bermudagrass (*C. dactylon*) and African bermudagrass (*C. transvaalensis*) (<https://turf.arizona.edu/tips697.html>) and cannot establish lawns from seed.

Common and hybrid bermudagrasses grow vigorously during the summer months and typically go dormant during the winter months. The occurrence of frost in November – December for several continuous nights or when extremely cold nights that are well below 32°F will cause bermudagrass to turn “blonde”. For this reason, bermudagrasses are overseeded with a winter grass to provide a lush green lawn throughout the winter months.

Planting bermudagrass lawns

The summer months are ideal to plant the bermudagrass lawn. Seeding generally takes about a month to fully establish a lawn and requires multiple irrigations throughout the day to ensure good seed germination and seedling establishment without drying out in the heat. Sodding will provide an instant lawn that will be ready for play and pets within a week. Sprigging or spreading the vegetative roots and stolons will be intermediate to seeding and sodding.

The usual recommendation is that a new bermudagrass lawn should not be overseeded with a winter grass in the first winter after its been planted. It is very stressful for the bermudagrass to green-up and regrow in the next spring while competing with the vigorously growing winter grass when environmental conditions are conducive for both to grow.

Typical summer lawn care activities

Non-overseeded bermudagrass will typically begin to green-up in February when air temperatures warm up; however, soil temperatures are not yet conducive for active growth. During April when 60°F soil temperatures are consistent, bermudagrass growth actively resumes and light fertilizing and irrigating can begin (Table 1). Hot and dry air temperatures in May – June start the vigorous growth period for the bermudagrass. Deep and infrequent irrigation every 3 days (versus multiple times everyday)

will encourage good root development for the turf. The lawn should be mowed regularly at the appropriate height of cut for the variety of bermudagrass (<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1681-2015.pdf>). The period of June, July, and August is the ideal time to dethatch or vertical mow and to aerify the turf. Aerifying and removing soil cores allow air and water to reach the deep roots. Continue feeding the lawn with ½ lb nitrogen (N) per 1000 sq ft each month through October. (e.g. ammonium sulfate [21-0-0] should be applied at about 2½ lb per 1000 sq ft). After October, cooler temperatures will slow the bermudagrass growth and an average first frost date will be in mid-November. The bermudagrass will be off-color for about 3 months in the winter.

Overseeding

During the fall, usually in October, when temperatures begin to cool and bermudagrass growth slows, winter grasses such as the ryegrasses (perennial or annual) can be seeded over the existing bermudagrass (Table 2). Aggressive and excessive dethatching and aerifying scalps the crown of the turfgrass and damages the underground rhizomes that are critically needed for the next spring's transition back to bermudagrass, if done immediately before overseeding. Procedures for the overseeding preparation are described in the publication "Overseeding Winter Grasses into Bermudagrass Turf". (<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1683-2015.pdf>).

Irrigating winter turf

Extra water must be applied to ensure that the winter grass seed germinates and the seedling establishes without drying out. Once established, the winter lawn will not require as much water as it took to seed it nor will it use as much as the bermudagrass uses in the summer months. A range of amounts of water to apply during the winter months will depend upon the soil type that can hold or not hold on to water to keep the roots adequately moist; the temperature where warmer days will encourage grass growth versus colder days when growth slows; and rainfall that can replace or supplement irrigation. The Arizona Meteorological Network (AZMET) provides a daily watering guide based on the weather conditions to replace the plant's actual need for water (<https://cals.arizona.edu/azmet/az-turf.htm>). Between November and May, a range of ½ to 1-½ inches per week of water may be needed by the winter turf.

Contrastingly, a non-overseeded bermudagrass turf that is dormant and "blonde" throughout the winter generally does not require supplemental irrigation. Only if winter rains are lacking, the irrigation system could be turned on once a month, December – February, to keep the roots moist and to prevent desiccation.

Spring transition for bermudagrass

In the spring when bermudagrass begins to transition back for the summer growth, there is a very fine line between over watering and over fertilizing the winter grass while trying to encourage the bermudagrass to successfully outcompete the winter grass. Warmer temperatures will favor the bermudagrass and hotter May – June temperatures should burn out the winter grass. Mowing the winter grass shorter will put a stress on it and enable more sunlight to penetrate and encourage the bermudagrass to grow.

Non-overseeded bermudagrass will naturally transition back earlier without the competition and will green up and initiate vigorous growth sooner. In the lower desert region, bermudagrasses are the best adapted for functional and aesthetic purposes.

Resources

- Bermudagrass varieties: Seed, Sod, or Otherwise. 1997. D. Kopec. Turf Tips. June 1997, Vol. 4, issue 6. <https://turf.arizona.edu/tips697.html>
- Overseeding Winter Grasses into Bermudagrass Turf. 2015. D. Kopec and K. Umeda. October 2015, AZ1683. <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1683-2015.pdf>
- Turfgrass Consumptive Use Values for the Phoenix Area. 2003. P. Brown. April 2003, AZ1314. <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1314.pdf>
- Turfgrass Consumptive Use Values for the Tucson Area. 2003. P. Brown. April 2003, AZ1313. <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1313.pdf>
- Mowing Turfgrasses in the Desert. 2015. D. Kopec and K. Umeda. September 2015, AZ1681. <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1681-2015.pdf>

Table 1. Maintenance Schedule for Non-Overseeded Bermudagrass in the Low Elevation Arizona Desert (Casa Grande, Phoenix, Tucson, Yuma)

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Notes
Planting (seed)					S	S	S	S					Seed (S) establishes in approximately 1 month
Planting (sod or sprig)					S	S	S	S	S				Sod (S) is instant and sprigs (S) establish in 2-3 weeks
Mowing					M	M	M	M	M	M			Mow (M) at least once per week
Fertilizing				F	F	F	F	F	F	F			Fertilize (F) with ½ lb of nitrogen (N) per 1,000 ft ² Once per month during summer. Use a higher phosphate containing fertilizer during the month when seeding or sodding a new planting
Dethatch/Aerify						C	C	C					Cultivation (C) performed on actively growing turf
Water (inch/month)			3.4	5.2	6.3	6.4	6.7	6.4	4.8	3.6			Total inches per month based on AZMET for Phoenix area

Table 2. Maintenance Schedule for Bermudagrass Overseeded with Ryegrass in the Low Elevation Arizona Desert (Casa Grande, Phoenix, Tucson, Yuma)

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Notes
Winter grass seeding										S			Seed (S) Sep. 25 - Oct. 5 in higher elevation Tucson Oct. 10 - Nov. 10 in Phoenix, Casa Grande, Yuma
Sodding	S	S	S		S	S	S	S			S	S	Winter grass already overseeded on to bermudagrass sod (S) in November to March
Fertilizing	F	F	F		F	F	F	F		F	F	F	Fertilize (F) with ½ lb of nitrogen (N) per 1,000 ft ² . Use higher phosphate containing fertilizer during the month after overseeding.
Dethatch/Aerify						C	C	C		D			Only light dethatching (D) prior to overseeding if needed. Cultivate (C) or aerify in summer.
Water (inch/month)	1.4	2.4	3.4	5.2	6.3	6.4	6.7	6.4	4.8	3.6	2.1	1.4	Total inches per month based on AZMET for Phoenix. October overseeding requires extra water to germinate and establish winter grass with multiple daily watering



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