

Overseeding Winter Grasses into Bermudagrass Turf

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In the lower elevation desert of Arizona, the warm-season turfgrasses (bermudagrass, zoysiagrass, and St. Augustinegrass) become dormant and typically lose their green color during winter. Overseeding bermudagrass with a cool-season grass provides a yearlong green lawn. An overseeded winter turf provides an aesthetic landscape and functionally provides a recreational turf.

Overseeding is the practice of seeding a cool-season winter grass into the existing bermudagrass lawn prior to it going into dormancy for the winter. The most common winter grass, perennial ryegrass, is planted into the prepared bermudagrass turf and it becomes green from October through May. St. Augustinegrass and zoysiagrass generally are not suited for overseeding.

Timing of Overseeding

October is ideal for overseeding when daytime air temperatures are 80-85°F and nighttime temperatures are about 55°F.

Overseeding too early when temperatures are warmer favors bermudagrass and prevents the winter grass from getting established. Later overseedings may be threatened by frost when young seedling grasses may be damaged.

Selecting Winter Grasses

Cool-season grass choices for winter turf include:

- Annual ryegrass (*Lolium multiflorum*)
 - Light green color, coarse leaves, and fast growing.
 - Requires frequent mowing.
 - Inexpensive grass for home lawns and commercial landscapes where moderate turf quality is desired.
- Perennial ryegrass (*Lolium perenne*)
 - Deep green color, narrow leaves, and has improved frost tolerance with better resistance to diseases.
 - More expensive than annual ryegrass and produces a better quality winter turf.
 - Persists longer in the spring and competes with bermudagrass that is greening up.
- Intermediate ryegrass
 - A hybrid between perennial and annual ryegrass with some desirable and undesirable qualities of each.
- Roughstalk bluegrass (*Poa trivialis*)
 - Fine-textured grasses commonly used for golf course greens
- Creeping bentgrass (*Agrostis stolonifera*)
 - Very fine-textured grasses used for golf course greens

Overseeding Procedures

Preparations

- 30 days before overseeding
 - Stop nitrogen fertilization of the bermudagrass lawn.
- 14 days before overseeding
 - Raise the mowing height 30 – 40%.
 - Decrease irrigation by 30%
- 1 - 3 days before overseeding
 - Stop watering
 - Mow at the “old” height that was before raising 30-40%
 - Just prior to overseeding, lower the mowing height another 25 – 30% and leave the clippings as mulch for the overseeded seed.
 - Do NOT scalp the bermudagrass to the ground level
 - For dense bermudagrass hybrid varieties, perform shallow, vertical mowings or lightly dethatch to reduce thatch and promote adequate seed contact with soil.
(Verticutting and aerifying should have been done during the summer when bermudagrass was vigorous and actively growing)

Amount of Seed to Use

- Use ryegrass seed at 12 to 15 lb/1000 ft²
 - Apply one-half of the seed by walking in one direction and the other half of the seed by walking in a pattern perpendicular to the first pass.
 - Drag or lightly rake the seed into the turf to ensure good soil contact or mow seeds into turf with a reel mower.

Irrigation and Fertilization

- Irrigate 3 to 4 times per day for the first 7 to 10 days, until seedlings emerge. Do not allow germinating seed to dry out. When seedlings are established, gradually reduce watering interval to about once a week. The top 6-inches of soil should remain moist. If a long screwdriver easily penetrates the soil to a depth of six inches and comes out damp, no additional irrigation is needed
- At 2 weeks after seedling emergence, fertilize with ammonium phosphate (16-20-0) at 5 lb/1000 ft². Always water after applying fertilizer. Over fertilizing can increase likelihood of frost damage, disease occurrence, and necessitate extra mowing.

Mowing

Grass should be mowed when dry and with a mower having sharpened blades.

- Ryegrass should be first mowed when height reaches 2¾ to 3 inches.
 - A rotary mower can be set to mow at 2¼ to 2¾ inches.
 - A reel mower on higher quality turf can mow the turf at 1 to 1½ inches.

Spring Transition

Bermudagrass resumes growth when spring nighttime temperatures remain above 60°F for seven consecutive nights. This generally occurs in April to May.

- Encourage bermudagrass growth by lowering mowing heights by 35% and mow more often.
- Apply nitrogen fertilizer weekly at a rate of 0.25 lb N/1000 ft².
- Do not stop irrigating. Any drying could slow bermudagrass growth.
- Once 80% of the lawn is established as bermudagrass, complete the transition by lightly verticutting to remove the ryegrass, apply 0.25 – 0.50 lb N/1000ft² and decrease watering for one week. Repeat the fertilizer application and water cycle to put stress on the ryegrass.
- Aerify bermudagrass during late June, July, through August.
- During the summer, bermudagrass should grow for 100 days to establish and grow vigorous roots and rhizomes. After 100 days of active growth, overseeding may be accomplished successfully.

September 2014

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