



ESTABLISHING AND MANAGING GOLD STRIKE BERMUDAGRASS

“The Gold Standard for Bermudagrass Lawns”

SITE PREPARATION AND REQUIREMENTS FOR A SUCCESSFUL PLANTING OF GOLD STRIKE

ADAPTATION RANGE: **Gold Strike** bermudagrass blend is well adapted to most regions south of 37th Parallel North in the United States (a line extending from Wichita, KS east and west) and areas with similar climatic conditions around the world.

SUNLIGHT: Bermudagrass does best in areas receiving full sunlight but will grow in areas with less than 25% shade. Areas of more than 25% shade result in weak stands and increased susceptibility to winter injury. In general, areas with too much shade will become obvious after the first or second year and those areas can be planted to a cool-season shade grass.

SOIL TYPE: Bermudagrass does well on most types of soil. Compacted heavy soils may need to be improved prior to planting. The incorporation of sand or topsoil in the top 4 to 6 inches will increase soil aeration and drainage.

DRAINAGE: Good drainage is necessary to maintain a healthy root system. Bermudagrass can withstand occasional periods of standing water, but prolonged periods of soil moisture saturation will weaken and eventually kill the stand. Areas of poor drainage should be corrected prior to planting.

SOIL PH: Bermudagrass will tolerate a wide range in soil pH but optimum performance is between 5.8 and 6.5. Low soil pH is best corrected prior to seeding by incorporating lime into the soil before or during seedbed preparation. The soil should be tested prior to seeding to determine if amendments are required. Your local cooperative extension office or fertilizer dealer can provide information on soil testing and make recommendations to correct any problem areas.

SOIL FERTILITY: A soil test can also provide you with information on the fertility level of your site. A basic soil test will provide nitrogen, phosphorous, and potassium levels as well as the pH. The phosphorous level should be maintained at a minimum of 65 lbs/acre. Potassium levels should be at a minimum of 200 lbs./acre. These two macronutrients are necessary for proper root and shoot development in the seedlings. An application of nitrogen should only be used if the soil test level is less than 45 lbs/acre. Do not apply more than 1 lb./1000 sq ft of actual nitrogen prior to planting. Excessive nitrogen in the soil promotes annual weed growth leaving the bermudagrass seedlings at a competitive disadvantage. As the bermudagrass seedlings develop, light applications of nitrogen can be applied to assist in establishment. If the site is suspected to have any micronutrient deficiencies an extensive soil test may be warranted. These deficiencies will also need to be corrected prior to planting.

SITE HISTORY: One aspect that is frequently overlooked when preparing a site for a new seeding is the prior application of a pre-emergent-type herbicide in the last 12 to 18 months. If pre-emergent herbicides were frequently used in the past, you will need to identify the herbicide and/or herbicides used and consult the label to determine the residual period of the specific herbicide. Always consider the product with the longest residual as your guide to determining if it is safe to plant. Pre-emergent herbicides are designed to inhibit the germination of weeds, but they also are highly effective at inhibiting the germination of the bermudagrass. Pre-emergent herbicides containing active ingredients such as prodiamine (Barricade®, Syngenta), (indaziflam Specticle®, Bayer), dithiopyr (Dimension®, Corteva) and pendimethalin (various trade names and manufacturers) are examples of those commonly used on lawns. They are extremely effective for crabgrass control in established turfgrass, but the long residual effect can result in severe stand reductions if new plantings are attempted prematurely on these areas. Also be aware some pre-emergent herbicides are now generic so trade names may have changed. Always check the label for the chemical name and required plant-back interval. One of the few pre/post-emergent herbicides that is safe on new plantings is Drive XLR8® (quinclorac, BASF). In addition, certain post-emergent grass herbicides, such as Fusilade® (fluazifop, Syngenta), may also have short term residual effects on germination and development. Your herbicide representative or local extension service can assist in helping you make this determination. Should there still be a possibility of a deleterious active ingredient on the site, the incorporation of activated charcoal may in some cases alleviate the problem. Consult a qualified turf professional for further assistance.

PLANTING DATE: Bermudagrass seed should only be planted during the spring and summer months once the soil temperature has reached 65 degrees F and is on the rise. It can be very tempting to begin seeding too early, especially in the northern areas of the transition zone when a brief warming period temporarily elevates soil temperatures to above 65 degrees F. If the soil cools back down the seed will lay in a moist cool soil thus leaving the seed more susceptible to seedling diseases. It is important to monitor the soil and determine that the temperature is trending upward over a 2-to-3-week period. The “cutoff” date for planting depends upon your geographic location. A simple rule to follow is not to plant within 75 days of the average first frost date for your location. This period may need to be extended to 90 days if the site is in the very northern part of the adaptation range. The newly established plants must have time to develop adequate roots prior to the first frost.

PLANTING RATES AND SEED CHARACTERISTICS OF GOLD STRIKE

SEED CHARACTERISTICS: Your **Gold Strike** Bermudagrass seed is coated with a technological advanced product to ensure the best possible chance of germination and survival. In addition, the purple coating is a clay-based product to make it easier to see and plant the naturally tiny brown colored seed.

SEED COUNT: The **Gold Strike** seed you have purchased has approximately 800,000 seeds per pound.

SUGGESTED SEEDING RATES:

Lawns: 2lbs/1000 sq feet* will result in 800 seeds/sq foot**

*Recommended rates can be adjusted to compensate for soil type, seedbed preparation, and establishment time.

**An approximation based on seed count on individual lot and even distribution of seed during seeding.

CHOOSING A STRATEGY FOR SEEDBED PREPARATION FOR GOLD STRIKE

TILLED SEEDBED: For most new installations or renovations, a tilled seedbed is preferred. Compaction problems, drainage problems, and other soil related problems are easiest remedied when the ground is free of sod and other plant debris. Cultivate the upper 4 to 6 inches of the soil with roto-tiller. You should use caution around existing irrigation lines, underground power boxes, trees, etc. during deep cultivation. Deep cultivation is necessary to alleviate areas of soil compaction, especially in tight soils. The addition of any required soil amendments and fertilizers can be blended throughout the rooting zone during the deep cultivation operation to ensure proper rooting of your newly seeded **Gold Strike**. Proposed drainage tile and irrigation installations should be completed after deep cultivation and prior to final seedbed preparation. Once sufficient grading and smoothing of the surface has been completed, the seedbed should be firmed using rakes or in the case of large installations, larger drag harrows may be used. The firmness of the soil is critical in insuring proper seed depth placement and seed-to-soil contact. The final seedbed should be firm enough to walk on with your foot leaving an imprint no deeper than ½ inch. This top ½ inch of soil should be loose, but moist, at the time of seeding. If additional firming is needed, water or roll the area. The seeding of small areas can be accomplished by broadcasting the seed by hand or with the aid of a ground driven spreader. To ensure proper distribution of seed, it is recommended to apply ½ the seed in one direction then apply the other ½ of seed in the direction perpendicular to the first. After seeding, cover the seed with soil to a depth of 1/8 inch by raking. Don't be too concerned if seed is still visible on the surface. This indicates you did it correctly. The most common cause of stand failure is planting too deep. Firm the area with a weighted roller. Water the seeded areas frequently to keep the top inch of the soil moist. Maintain this moisture layer to ensure good germination and development. You may have heard the phrase "YOU NEED GOOD SEED TO SOIL CONTACT" and if you haven't, now is the time to get familiarized with it. This is the most important thing you must do for success. You want the seed firmly tucked into the soil, so the seed is tightly surrounded by soil particles. Moist soil will then hold water firmly against seed so it will imbibe and begin the germination process uniformly. The combination of rolling and watering will complete this process. Loose soil and spotty watering will lead to a sporadic stand. Avoid run-off and standing water. As the seedlings develop, the frequency of watering is reduced but the amount per application is increased.

PATCHING A DAMAGED OR THINNED AREA OF BERMUDAGRASS: Although bermudagrass is known for its excellent wear tolerance and stress resistance, stand thinning and damage can still occur under extreme conditions. Seeding can be done relatively easily and inexpensively. The first step is to identify the cause of stand loss. If a heavily compacted area, perform deep aeration or deep cultivation to alleviate the compaction to achieve sufficient root growth. Remove any unwanted vegetation from the area to be seeded. Firm the soil via raking and plant as described below. If winterkill is the issue and the area is not heavily compacted, a vertical aerator may be used to shallow-till the area. Follow the aeration process with hand raking to remove any plant debris. Continue to smooth and firm the area with the rake. When firm enough that your foot only imprints to ½ inch, the once damaged area is ready to seed. Following the seeding operation, keep the top inch of the soil moist. Adhere to the "YOU NEED GOOD SEED TO SOIL CONTACT" as described in the previous section. As the seedlings develop reduce the frequency and increase the amount of application. Restrict traffic until firmly rooted.

GOLD STRIKE EMERGENCE AND WEED CONTROL

WEED CONTROL: Weed control in newly seeded stands of bermudagrass presents many challenges. Competition from annual grass and broadleaf weeds is in most cases inevitable. Summer annual weeds such as crabgrass, foxtail, pigweed, carpetweed, knotweed, goosegrass, and yellow nutsedge are some of the most common weeds you will experience in the establishment year of your new planting and many of those same ones will continue to be problems in later years. The difference is after the establishment year you have a lot more tools in your toolbox to aid in the control of weeds, specifically the use of pre-emergent herbicides. The first year, during the establishment phase, is the most critical since you want to get your grass to grow and cover as quickly as possible. A healthy stand is your best deterrent to additional weeds moving forward. Once the seed was planted, you began watering which causes the seed to imbibe water. At that starting point, you should start to see germination in 7 to 14 days assuming the soil temperature is consistently over 65°F and you have maintained moisture to the seed throughout the process. During this 7 to 14 day process you will probably notice plants other than your bermudagrass coming up also. Currently there are very few herbicides that are labeled and safe to use on new stands of seeded bermudagrass. The most widely used product that is labeled for seeding bermudagrass is Drive XLR8® by BASF. The active ingredient is quinclorac. Drive XLR8® is labeled for both residential and non-residential turfgrass. Drive XLR8 is very strong on grassy weeds, specifically crabgrass. Crabgrass is considered one of the most problematic grassy weeds in bermudagrass. As per the label, Drive XLR8® can be applied 7 days after emergence. Another herbicide that is labeled for seeded bermudagrass is Quicksilver® by FMC. The active ingredient is carfentrazone. Quicksilver® is active against many broadleaves and is labeled to be safe 7 days after emergence of the bermudagrass. As the seedlings develop and begin to spread laterally, they become more tolerant of herbicide use. Following active lateral growth, products containing 2,4D, dicamba, and mecoprop can be applied to help control broadleaf weeds. Apply when temperatures are under 85°F to reduce injury.

Prior to any application of pesticide products “ALWAYS READ AND FOLLOW THE LABEL”. This is for your safety, the safety of others, the safety of your crop/plants, and the protection of the environment. Wear the appropriate Personal Protective Equipment. If you are not comfortable applying these products safely and accurately, consult a professional to apply them for you.

Consult these additional publications for more specific and in-depth information on protecting your new bermudagrass.

- Patton, A.J. Establishing Seeded Bermudagrass on Lawns, Golf Courses or Athletic Fields. University of Arkansas Extension Publication.
<http://turf.uark.edu/publications/factsheets/Establishing%20Seeded%20Bermudagrass%20on%20Lawns.%20Golf%20Courses%20or%20Athletic%20Fields%20MP477.pdf>
- J. Scott McElroy, Greg K. Breden, Fred Yelverton, Travis W. Gannon, Shawn Askew, Jeffrey F. Derr. Seeded Bermudagrass Response to Herbicides During Establishment. Golf Course Management January 2005.
<http://www.gcsaa.org/gcm/2005/jan05/pdf/4McElroyBredenYelvertonetc.pdf>

FERTILIZING YOUR NEW STAND OF GOLD STRIKE

FERTILIZER RECOMMENDATIONS: During the grow-in phase, it is recommended to apply 0.5 lbs. nitrogen/1000 square feet every 2 weeks with the first application made 2 weeks after emergence. Continue this schedule for 60 to 90 days then apply 1.0 lb. of Nitrogen/1000ft² each month of the growing season. Stop applying 45 days prior to expected first frost. It should also be noted in the fall, when the grass is preparing for dormancy, it is recommended to apply additional amounts of phosphorous and potassium.

Beginning the second year, apply 1.0 lb. of actual N/1000 square feet each growing month. Begin the initial application at green-up in the spring and continue till 45 days prior to expected frost.

FERTILIZER FACTS: When purchasing fertilizer, the analysis is typically described as 3 numbers separated by hyphens. The first number is the percentage of actual nitrogen (N), the second number is the percentage of phosphate (P), and the third number is the percentage of potassium (K).

For example, a product label 10-20-10 is 10% actual nitrogen (N), 20% actual phosphate (P), and 10% actual potassium (K).

For example, if you were needing to apply 1 lb./1000 square feet of actual nitrogen of a product labeled 46-0-0, you would need 2.2 lbs. of product. Calculated by dividing 1 by 0.46 (46% N in product) which equals 2.2 lbs. of product.

Another example, if you applied 10 lbs. of 10-20-10 per 1000 sq ft you would get 1 lb. of Nitrogen, 2 lbs. of phosphate, and 1 lb. of potassium applied on 1000 square feet. Calculated by 10 x 0.10 = 1 lb. N, 10 x 0.20 = 2 lbs. P, and 10 x 0.10 = 1 lb. K, respectively.

Federal law requires all fertilizer products to be labeled with an analysis described above.

MOWING YOUR NEW STAND OF GOLD STRIKE

MOWING: Begin mowing the new stand approximately 3 to 4 weeks after emergence depending on the conditions at the time of establishment. The recommended minimum mowing height during establishment is 1.5 inches. Should it become necessary to mow to control weed growth, it is recommended to mow just above the canopy of the grass unless the grass growth exceeds 1.5 inches. Once the stand matures, the mowing height can be gradually reduced to a minimum of 1 inch. As the mowing height is decreased, the required management level will be increased. As a rule, never remove more than 1/3 of the grass height at any one time. Should the growth become excessive, raise the mower deck and gradually reduce it over frequent mowing to prevent discoloration from scalping.



IMPORTANT POINTS TO REMEMBER

1. Bermudagrass planted from seed does not develop rhizomes (spreading underground roots) during the establishment year. Therefore, first year plantings are generally the most susceptible to winter injury. Once the rhizomes form in the 2nd year the stand becomes substantially more tolerant to drought, heat and cold.
2. It is especially important to maintain adequate phosphate and potassium levels during the first year to maximize stolon and root growth during the year of establishment. In regions that experience colder temperatures this applies every year.
3. When planted in regions that reach temperatures below 20°F, it is best to allow the grass to grow to 1.5 to 2.0 inches in height prior to first frost. This provides insulation for the crowns and stolons during periods of extreme cold.
4. In regions with unusually cold winters do not apply additional Nitrogen within 60 days of first frost in the fall.
5. Do not remove more than 1/3 of the plant height during any single mowing or discoloration from scalping will occur. If the growth becomes excessive during a period when mowing was delayed it is best to gradually bring the height back down to the desired level. This can be performed by initially raising the mower deck, then perform frequent mowing all the while gradually lowering the mowing deck back to the desired level. This should minimize discoloration of the turfgrass.

PVP STATEMENTS

RIO (202000184) is protected by the United States Plant Variety Protection act PVPA 1994

HIGHLANDER (201000447) is protected by the United States Plant Variety Protection act PVPA 1994

MONACO (201800166) is protected by the United States Plant Variety Protection act PVPA 1994

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