

The Establishment and Maintenance of Zoysiagrass from Seed



Zoysiagrass seedling 18 days after seeding



Zoysiagrass seedling 8 weeks after seeding

SEED: Most of the zoysiagrass seed sold worldwide has been pretreated, or primed, to improve the germination percentage and speed, by breaking the natural seed dormancy. This is true for the improved turf-type varieties, as well as the numerous branded versions of common *Zoysia japonica* from Asia. Occasionally, with some of the newer turf-type varieties, this seed treatment is not needed based on lab test results. Zoysiagrass seed offered for sale, whether treated or not, should have a germination percentage over 75% to produce good results on a turf project. Pretreated/primed seed should be planted the same season, not stored for extended periods of time. Zoysiagrass seed is also offered for sale as coated seed, with approximately 50% purity. This "pelleted" seed is generally less expensive, and can produce satisfactory results if planted and watered correctly.

SOIL PREPARATION: Cultivate your soil to 6 inches, incorporating lime, any organic soil amendments and preplant fertilizers as needed or based on soil tests. Zoysiagrass performs best under neutral to slightly acid pH conditions. Prepare a medium-fine, firm seedbed - using a light roller on the finished seedbed is beneficial to level and firm the area.

SEEDING AND IRRIGATION: Zoysiagrass seed should be planted in late spring or early summer when nights are warm and daytime temperatures are consistently over 75 deg F (24 deg C) - a warm soil temperature over 70 deg F will produce the best results. Do not seed after mid-late summer, or the slow growing plants will not be well enough established to survive the first winter. Plant 1-2 pounds of good quality raw or coated zoysia seed per 1,000 square feet. Cover the seed very lightly with soil by raking or rolling the turf area - a billion seeder also works very well, if the seed is planted shallow. Zoysia seed must be planted near the soil surface as it requires exposure to some light to germinate properly. A thin layer of mulch or straw can be beneficial in retaining soil surface moisture during germination. Depending on rainfall, irrigate the zoysia seed lightly several times a day to keep the soil surface continuously moist for the first two to three weeks. After the seeds have germinated, the watering should be reduced to less frequent, but longer, deeper soakings to promote development of a healthy deeper root system. Established, properly maintained zoysia turf will use far less water than many other turfgrass species.

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FERTILIZATION: Approximately four weeks after seeding apply a complete, balanced fertilizer to the newly established turf area. For faster coverage during the establishment year, a rate of 1 1/2 pounds of nitrogen per 1,000 square feet is recommended every month during the growing season. After the first year, a light fertilizer application after spring green-up and one in late summer should suffice to keep the zoysia turf healthy.

MOWING MAINTENANCE: Start mowing the new zoysia seedlings as soon as they reach 2 inches in height and mow frequently to stimulate spread and reduce weed competition during establishment. A turf height of 1-2 inches in full sun and 2-3 inches in shade will produce the best results. Zoysiagrass turf can be mowed with any type of mower, but the blades must be kept sharp to perform well on the tough zoysia leaves. After the first year, mow as often as necessary to maintain a healthy turf and good appearance. Zoysiagrass is a slow growing turf species, allowing for less frequent mowing when it is maintained correctly.

PEST AND WEED CONTROL: Several weed control products are labeled for zoysiagrass turf during establishment, as well as for later maintenance. Contact your local extension office or turf chemical dealer for specific recommendations in your area. Occasionally zoysia turf can suffer minor damage from turf diseases such as Large Brown Patch (*Rhizoctonia* fungus) or leaf rust, and from insect pests such as grubs, bill bugs and mole crickets. Overall, well maintained zoysia turf is resistant or tolerant to most turf insects and diseases. This environmentally friendly turf species requires few chemicals for good growth. Consult your local extension office or turf chemical dealer for appropriate control recommendations if needed.

WINTER OVERSEEDING: Both seeded and vegetative Zoysiagrass turf goes dormant during winter, turning a golden brown color until warm temperatures return the following spring. Winter overseeding with cool climate turf species is generally not recommended on zoysia, especially on newly established turf. Too heavy of a seed rate application or too invasive of preparation method can severely damage any zoysia stand. On mature healthy zoysia, if desired, a fall overseeding application of perennial ryegrass seed such as Champion can produce good results, but only seed the ryegrass at half the normal seeding rate. Due to the density of zoysia turf, the ryegrass seeds must be raked in well for good soil contact.

MIXING OR INTERSEEDING: Seeded zoysia performs well in a mixture with turf-type tall fescues, as long as the turf manager maintains a primary fertilizer schedule in the fall and early spring - do not fertilize in mid-summer for best results.