

Establishing Jacklin® Zoysiagrass Seed

There are many factors important for encouraging new establishment of seeded zoysiagrass. The objective is to optimize the environment for germination and establishment and to reduce weed competition for sunlight, water and nutrients. Warm temperatures, sunlight penetration to the seed, and irrigation to avoid stress are the most critical environmental concerns. Of course, minor concessions can be made based upon available budgets and Mother Nature's cooperation. All efforts should be made to optimize coverage in the first season. Here are some pointers for increasing success with Jacklin Seed Company's zoysiagrass:

Prepare a firm and fine seed bed with good surface drainage. Seed in the Spring after all danger of frost is past and soil temperatures at the 4" depth are at 70°F (21°C). Daytime temperatures should be consistently in the 80's or above. If seeding is delayed until summer, make sure that there are more than 8 weeks of 75°F minimum daytime temperatures before date of first frost to ensure sufficient establishment before winter. Broadcast or slit-seed in two directions at least 2-3 lbs/1000ft² (10-15 g/m²).

Hydroseeding is one useful method. Broadcasted seed should be lightly raked into the soil surface and then firmed with a lawn roller or culti-packer. Slit-seeding to a depth of less than 4mm has been very successful on firm soil to prevent washing and conserve moisture near young seedlings. Zoysia requires light for germination and therefore should not be incorporated below 6 mm. Try to keep slits open for light penetration. Apply a complete starter fertilizer at the soil surface following seed application to ensure adequate nutrition for young seedlings. One to 7.5 g/m² of actual nitrogen along with 10-15 g/m² of phosphorous will help young seedlings to produce tillers and develop strong roots.

Irrigation should commence immediately by slowly wetting soil to a 15cm depth. Keep the soil surface consistently moist with several light water applications each day through establishment. Once turf is established, reduce watering frequency but water more deeply.

Use of vented polyethylene tarps or covers, which allow light penetration and air movement can help to reduce the frequency of follow-up irrigation. These covers will also effectively extend the growing season earlier in the spring and later into fall. The covers create a greenhouse effect, which elevates daytime soil temperatures and maintains higher night-time temperatures. On a larger scale, rolls of plastic films can be drilled for aeration and spread with machinery for a less expensive treatment. Covers should be removed during mid-summer conditions to avoid supra-optimal temperatures.

Germination should be observed in 21-28 days depending upon temperature and sunlight conditions. Young seedlings are typically quite small and slow to spread, but patience and care return dividends. The zoysia can be pushed slightly with nitrogen fertilization during the summer. Applications between 3-5 g/m² of actual nitrogen twice per month will help to increase establishment rates. In the U.S., eliminate nitrogen in September/October in the establishment year and reduce applications to approximately 10-15 g/m² per year in subsequent years. Zoysiagrass has a very low N requirement after establishment. After establishment, sometimes the less you do to it the better. Potassium fertilization up to 20 g/m² per year will help young seedlings maintain optimum stress hardiness.

Weed competition with zoysia can be quite severe during establishment depending upon preparations of soils and cleanliness of irrigation water. The University of Georgia has developed an effective herbicide program to reduce weed infestations during zoysiagrass establishment. Their program includes pre-emergent 'Siduron' at seeding time followed by 'Oxydiazon' after 4 weeks. (See The University of Georgia Turfgrass Field Day book from July, 1995 and herbicide label instructions for rates and details prior to use.) 'Ronstar' can be applied to control weeds in young seedlings. Fertilize at same time as applying 'Ronstar'.

Fumigating soil prior to establishment would eliminate most early competition from many other grasses and weeds. Mechanical weed control either through vertical or rotary mowing can be effective in reducing competition of many broadleaf weeds post-emergence. Excess clippings should be collected if possible to avoid heavy mulch deposits. Keep mower blades sharp at all times.

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