# Seedbed preparation for Bermuda Grass

### How to Use This Checklist & Seed Sowing Guidelines:

The following points are meant to cover most of the items that should be addressed for the successful establishment of Bermuda varieties from seed.

### Seedbed Preparation:

The time, money and effort spent on proper seedbed preparation will reward you in the short term regards initial seed strike, but most importantly, proper seedbed preparation is key to healthy seedling development, stand establishment and relative ease of maintenance over the life of the stand. *There is simply no substitute for good seedbed preparation.* 

The top 150mm of soil should be worked up so the soil is loose and crumbles in your hands. This allows for water to drain through the soil profile and improves the germinating seedlings ability to send roots down into the soil.

Test the soil and follow recommendations from the soil test. Minimum soil pH for germinating and growing couch is 5.5 to 6.0, *however, 7.0 is ideal*.

#### PLEASE NOTE:

If the soil pH is hovering at the minimum levels and you are in an area that is subject to heavy rainfall, then your goal should be a soil pH closer to 7.0. When the soil pH drops below minimum levels,

Bermuda grass seed will simply not germinate and any Bermuda grass seedlings will stop growing. Water quality is equally important. If you are not absolutely certain about your water quality, test it.

The top mm of soil should consist of topsoil; rich loose soil with organic matter. If the topsoil has been removed during the construction process, it will need to be replaced with similar material. Skimping on organic matter can contribute to poor growing conditions and disease problems later on.

Any soil that is present in or added to the seedbed should be well blended before and after incorporating into the existing soil. Failure to do this can result in spotty results or the creation of trouble spots later on. A uniform soil profile = uniform appearing stand.

#### Irrigation and Drainage:

Proper drainage is essential. Is there a low end on the site? High spots in the middle? Are there areas on site where water may run and erode the soil? If so, the seedbed must be prepared to help prevent deep erosion. The establishment of Bermuda grass will prevent further erosion, but the Bermuda grass seed has to be able to germinate and take hold before it can do so. The seedbed should be properly graded with site use and drainage in mind.

The flip side of drainage is water conservation or erosion control. The water needs to remain in the soil profile long enough for the roots to have access to it.

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How is the water going to be delivered to the site? Is establishment going to be dependent upon existing soil moisture and natural rainfall? Is an irrigation system going to be utilized for water delivery? If the establishment is subject to existing soil moisture and natural rainfall, it is recommended to have a temporary water delivery system available during the establishment phase to supplement, if needed. If an irrigation system is going to be used, care should be taken that the system provides full coverage over the area with no dry spots or areas of ponding.

Regards watering, Bermuda grass seed needs a moist seedbed – not wet or standing water – for germination. The moisture needs to be maintained around the seed during the first two to four weeks of establishment. It may be reduced as the seed germinates and the seedlings emerge. While it may not look like very much is happening at first on the surface, the roots are developing so if the surface dries up, so does the root development.

#### Seed Sowing:

When it comes to sowing Bermuda grass, it is very important not to plant too much seed. Bermuda grass has very small seed. If too much seed is planted, you run the risk of intense seedling competition which causes grass to grow more upright and not to creep across the surface as it should, root development is curtailed so the plant is not as drought or cold tolerant as it should be, and the high plant density reduces the movement of air at the soil surface which can lead to disease problems that we normally do not encounter with Bermuda grass such as damping off. This is truly a case of where *"if a little is good, a lot is NOT better"*. More seed can easily be added to a site if you feel you need more plant density, but trying to thin out a stand that is too thick is time consuming and labor intensive.

The sowing rate for Bermuda grass is generally 0.5 to 1 kg per 100  $m^2$ . How much you sow will be determined by how quickly you want to have full cover established and site characteristics such as dependence on natural rainfall and the time of year (early or late sowings generally require more seed).

Bermuda grass is a warm season grass, which means it has minimum soil temperature requirements for germination and establishment. This is one of the most critical factors to successful Bermuda grass establishment. The minimum temperature should be either holding steady at 18 degrees or on the increase.

If the soil temperature gets too cool when the grass is becoming established, it may simply stop growing and just stay at that stage until the temperature warms up. Likewise, when it is too cool for growth, the plant may express this with a purpling colour on the stems and leaves. However, care must be taken to make sure that the purpling is temperature related and not a nutritional deficiency.

Bermuda grass may be established via many different methods. Whether it is broadcast by hand, sown by using a seeder or hydro seeded, one thing remains the same – do not cover the seed with too much soil or top dressing. Bermuda grass likes to be right at the surface. Make sure there is not more than 6mm of material over the seed.

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### Fertilisation and Mowing:

Regards fertilization at the time of sowing, if you have followed your soil testing recommendations, normally this is not needed. However, many people still like to apply fertilizer when they sow the seed. There are many of these types of formulations available. Look for something that is balanced and formulated for this purpose and apply per label instructions. After the stand is established, the Bermuda grass will usually be your best guide as to when you will need to fertilize again. When it begins to turn lighter in colour, fertilize as needed.

Regards first mowing or cut, do not wait for the entire stand to germinate before cutting the grass. It is best to keep your Bermuda grass short from the beginning. Mowing will encourage the Bermuda grass to spread and fill in quicker. Just make sure that you do not remove more than 1/3 of the plant material at any one mowing so that you avoid scalping or yellowish-white streaks in your stand from removing too much leaf. Severe scalping can cause the plant to stress and leave it more prone to attack by disease.

For more information on growing Bermuda grass please Specialty Seeds:

Phone: 0800 727 8873 Email mail@specseed.co.nz



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