



A Look At ...



FORCE OF NATURE — THE WHOLE TRUTH FROM AN INDEPENDENT PERSPECTIVE from
National Organization Responding Against HUJE that seek to harm the Green Space Industry (NORAHG)

Seed

A Look At Turfgrass Seed Management

How Long Grass Will Take To Germinate In The Spring

November 2009, Volume 12, Issue 5

Jacklin Seed Research News Flash

Selected and adapted excerpts

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Is there some way of predicting how long grass will take to germinate in the spring, especially when temperatures are cold ?

There are a few research studies that address this issue, mainly by Danish authors.

An article by Søren Ugilt Larsen and Bo Martin Bibby allows you to predict when in the spring Kentucky bluegrass will germinate, given daily air temperature.

The trick is to keep a running tally of all the daily maximum temperatures above 2.6°C (or 37°F).

If you take your daily high, subtract 2.6 °C (or 37°F), your Kentucky bluegrass will reach 50 per cent germination when the running sum exceeds 115°C (207°F) cumulative degrees.

Thermal time for perennial ryegrass is 63.9 C (115°F), and 43.8°C (79°F) for red fescue.

An older but still relevant article comes from a 1940 USGA publication by Aubrey W. Naylor.

Naylor explains that mature Kentucky bluegrass grows in the spring long before its seed would germinate.

Bluegrass — when well-established, grows most vigorously at temperatures between 60° and 75°F.

Kentucky bluegrass, once it has become established, will grow well under conditions which are unfavorable for the germination of its seed and for early growth.



Classification Of Turfgrasses According To Their Seed Characteristics

Turfgrass species	Seed germination rate under optimal conditions	Seed establishment rate under optimal conditions	Optimal germination temperatures
Annual bluegrass	Moderately fast 10 to 20 growing days	Moderately slow 3 to 4 growing months	20 to 30°C
Annual ryegrass	Very fast 3 to 5 growing days	Very fast ½ to ¾ growing month	20 to 30°C Pre-chill 3 to 10°C
Canada bluegrass	Moderately slow 15 to 30 growing days	Slow 4 to 6 growing months	---
Chewings fescue	Moderately fast 10 to 20 growing days	Moderately fast 2 to 4 growing months	20 to 25°C Pre-chill 3 to 10°C
Colonial bentgrass	Moderately fast 10 to 20 growing days	Moderately slow 3 to 4 growing months	15 to 30°C Pre-chill 3 to 10°C
Creeping bentgrass	Fast 5 to 10 growing days	Moderately slow 3 to 4 growing months	15 to 30°C Pre-chill 3 to 10°C
Creeping bluegrass	Fast 5 to 10 growing days	Moderately slow 3 to 4 growing months	---
Hard fescue	Moderately fast 10 to 20 growing days	Moderately fast 2 to 4 growing months	---
Kentucky bluegrass, most cultivars	Moderately slow 15 to 30 growing days	Slow 4 to 6 growing months	15 to 30°C Pre-chill 3 to 10°C
Kentucky bluegrass, some cultivars	Moderately fast 10 to 20 growing days		
Perennial ryegrass	Fast 5 to 10 growing days	Fast App 1 growing month	20 to 30°C Pre-chill 3 to 10°C
Red fescue	Moderately fast 10 to 20 growing days	Moderately fast 2 to 4 growing months	15 to 30°C Pre-chill 3 to 10°C
Red top	Moderately fast 10 to 20 growing days	Fast App 1 growing month	20 to 30°C
Rough bluegrass	Moderately slow 15 to 30 growing days	Slow 4 to 6 growing months	20 to 30°C Pre-chill 3 to 10°C
Sheep fescue	Moderately fast 10 to 20 growing days	Moderately fast 2 to 4 growing months	---
Tall fescue	Moderately fast 10 to 20 growing days	Moderately fast 2 to 4 growing months	20 to 30°C

Establishment rates are an estimated measure of the time required for seedlings to develop, under optimal conditions, into mature and healthy plants that are « *ready-for-use* ». The optimal conditions for the seed germination of most species may not require a single temperature, but a rhythmic alternation of temperature. In the above table, the first number indicates the initial temperature that must be maintained for approximately sixteen hours. The second number indicates the following temperature that must be maintained for approximately eight hours. (Beard, 1973)

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