

## SEED PREGERMINATION

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All turf starts with seed. By getting a good stand of improved varieties, we make our job of managing and maintaining turf easier. To obtain the quickest possible turf stand, many different things are done with seed. Some of these are:

- Seed Treatments
- Seed Coating
- Seed Dressings
- Seed Priming
- Seed Pregermination

Seed Treatments, Coatings, and Dressings do not speed up germination, but are applied to help establish, protect, and maintain the initial establishment. Seed priming starts the germination process and if done right (a big "if") can speed up germination and establishment by a few days.

Seed Pregermination is different from all these other applications. In seed pregermination, we actually start seed germination prior to planting and then proceed to plant germinating seedlings. This is a proven and effective technique to speed up turf establishment.

The advantages of seed pregermination are obvious. A more rapid turf establishment and a quicker use of the turf. By using pregermination techniques we can extend the planting season later into the fall and start it earlier in the spring than is normally possible.

There are, of course, disadvantages with pregermination as well. It does increase the cost significantly and should only be done when the cost/benefit ratio makes it worthwhile. Also, once the project is started, there is no "turning back". The seed being pregerminated must be used or it will be spoiled. Keeping pregerminated seed in a refrigerator will extend usefulness of the seed. Also, pregermination is more difficult than normal planting and care must be taken not to damage the germinating seed.

Although there are many seed pregermination methods, the principles are always the same:

1. Soak seed in room temperature water (approx. 70°F)

2. Change water frequently (twice daily) to remove seed exudate.
3. Maintain constant oxygen to the seed.

George Toma, the well know turf manager who prepares all the Super Bowl turf, is the best known proponent of seed pregermination. He has a very simple, but effective, pregermination technique that can handle both large and small amounts of seed. The "Toma Technique" is as follows:

1. Using one or more clean 50 gallon drums, punch 6 or so holes in the bottom of the drums and plug the holes with metal screws.
2. Add however much seed is needed and then pour in room temperature water (approx. 70°F) to cover the seed by a few inches. Stir the seed/water mix.
3. Every morning and evening remove the screws and drain the water. Then plug the drums and refill.
4. When germination starts, (with ryegrass usually around the fourth day) drain the water and spread the seed on the floor. Let it drain and dry slightly and then mix with a carrier such as milorganite, sand, calcined clay, or ground corn cobs to a consistency that can be spread through a drop spreader.
5. Spread the seed making sure it never dries out during or after planting. Keep the field moist and seedlings will emerge within a few days.

Pregermination does work. If you absolutely positively have to establish turf in the shortest possible time, you should use it. Done properly, pregermination will get you using new turf in the quickest possible time.