

## Rule Change Proposal No. 9

**PURPOSE:** To add a new media method to section 4.9a. Substrata.

### PRESENT RULE

#### 4.9 Explanation of Table 3

Table 3 contains specific germination requirements for the kinds of seeds listed in column 1. If the genus and species is listed, that listing shall be used. If the species is not listed, use the spp. listing for that genus. Some explanations of these tables and additional germination requirements and conditions are as follows:

a. Substrata. – Symbols for substrata in column 2, Table 3 are: B = between blotters; TB = top of blotters; T = paper toweling, used either as folded towel tests or as rolled towel tests in horizontal or vertical positions; S = sand; TS = top of sand; P = covered Petri dishes with (a) two layers of blotters, or (b) three thicknesses of filter paper, or (c) top of sand; PT = substrata listed for P with the following substrata also allowed: sponge rock, vermiculite, terralite, or a mixture of 50% sand and vermiculite, sand and perlite, etc.; C = creped cellulose paper wadding (0.3-inch thick Kimpak or equivalent) covered with a single thickness of blotter through which holes are punched for the seed which are pressed for about one-half their thickness into the paper wadding; RB = blotters and raised covers, prepared by folding up the edges of the blotter to form a good support for the upper fold which serves as a cover, preventing the top from making direct contact with the seeds; TC = on top of creped cellulose paper without a blotter. PP = pleated filter paper.

### PROPOSED RULE

#### 4.9 Explanation of Table 3

Table 3 contains specific germination requirements for the kinds of seeds listed in column 1. If the genus and species is listed, that listing shall be used. If the species is not listed, use the spp. listing for that genus. Some explanations of these tables and additional germination requirements and conditions are as follows:

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### SUPPORTING EVIDENCE

This change would define TCS if adopted as an alternative media method for *Zea mays* subsp *mays* or *Glycine max*. The proposed TCS method has been in use at the Iowa State Seed Science Center and Mid-West Seed Services, Inc. (MWSS) for twenty-three and nine years, respectively. In practice this test is called a “Sand Test” by both laboratories; we are documenting the “Sand Test” method. The test is conducted at MWSS by placing a sheet of creped cellulose paper on a tray and applying a standard amount of water, seeds are placed on the moistened paper and then dry sand (no moisture) is used to cover the seeds, the moisture migrates upward wetting the sand. This method is very reproducible since the moisture content of the sand is standardized. As with many substrate methods the moisture level of the sand may need to be varied for sensitive species.

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