

Media for germinating seeds — Germination tests using different media were being run as a laboratory experiment in a class in Horticulture. Following a suggestion by C. R. Burnham, sand was included with the perlite and peat moss for three lots of corn seeds: Hayes white sweet corn (1973 crop), seed from ears of A188 not fully matured at the time of a heavy frost in September, 1974, and a dent corn cross at least 10 years old. The test was not replicated, and only nine seeds were planted in each trial; the daytime temperature was 80^o F, nighttime 70^o. After five days, 8 of the 9 Hayes white seeds planted in sand were up, only 4 of the 9 in peat moss and 5 of the 9 in perlite; of the A188, 4 of the 9 emerged in sand, none in perlite and 2 in peat moss. With the old seed there were no plants up at the end of five days; but at the end of eight days, four had emerged in the peat moss.

Steve Ruce

Additional notes on seed germination — For some time I have had excellent success using fresh sand in a greenhouse bench to start plants from very old seed or seed from ears only partially developed at the time of harvest, in many cases advanced little beyond the milk stage. By planting in the sand bench a few days after the field plantings, the plants were ready to transplant to the field a few days after emerging in the sand.

There is evidence that silica stimulates the germination of wheat stem rust spores. I am almost convinced that sand may stimulate seed germination, but it may be that the conditions regarding moisture and texture are better in sand. I have had better success with tests in sand than in petri dishes.

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A positive selection technique for photosynthesis mutants of maize — We have previously reported a screening technique to isolate mutants of the photosynthetic light reaction (MGCNL 46:127-29, 1972). That procedure was an adaptation of one used for green algae that simply monitors the level of chlorophyll fluorescence (P. Bennoun and R. P. Levine, Plant Physiology 42:1284, 1967). The fluorescence technique works well with maize but there is one class of mutants for which it would not select, namely those lacking activity on the oxidizing side of photosystem II. On culture plates of algae this class of mutants has a lower than normal fluorescence yield, but selection of low levels of fluorescence is not practical with whole leaves since the normal green plant has a low level of fluorescence to begin with.