

minutes in a 1:19 dilution gave fair seed set with no whole kernel and 5 fractional losses for R among 238 kernels for the 3 to 4 minute time but a rapid reduction in seed set for progressively longer treatment times.

These results contradict an earlier report (MNL 42:125) where it was stated that no reduction in seed set occurred after the first 3 minutes of treatment time. The reason for this is that in the first experiment a glass vial was used allowing the sunlight to inactivate the nitrosoguanidine, while in the second experiment a plastic vial covered with masking tape was used, thus protecting the solution which retained its activity. The effect of sunlight inactivation is demonstrated by the data in Table 1 where seed set and frequency of whole and fractional kernel changes for the A^b-Sh segment of chromosome #3 are compared. Note that there is no significant change in seed set or frequency of changes after 3 minutes.

From these tests we have concluded that the best results can be obtained with a 1:19 dilution of our stock solution which is kept in the dark but mixed with pollen in daylight and used within a 50 minute period following initiation of treatment.

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1. The endosperm mutant described as "similar to sh₂" in News Letter 44 proved to be allelic to brittle-1. It was induced in the field corn inbred Bl4, and is Y Su. Aleurone constitution is AAccrrPrPr. Seed is available.

2. An induced Bl4 plant mutant has proved to be allelic to brachytic-2. Vigor of mutant is good. Seed is available.

3. Seed is available of most of the seedling mutants described in the Maize News Letter 44. I will not be growing any of these in 1971.

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