value of 3.7 for bm-T. The other test is non-discriminatory. The bm marker is known to be in the short arm, very close genetically to the centromere. If it is a centromere marker, then this order shows the interchange is SL and not LS. The diakinesis observations from the intercrosses indicate this interchange is either SL or LS. The pr marker is at about 5L.3, ys is distal to SL-6 at 5L.45, yg is distal to LL-5 at 5L.82.

The data for chromosome 1 markers are based on relatively small numbers.

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4. A stain for pollen sterility determinations.*

A simple staining technique can be used for efficient and accurate recording of pollen sterility. Certain advantages result from the use of a gel-like mixture prepared as follows:

1 gm of agar is dissolved in 50 ml of distilled water and boiled for 3 minutes.

6 ml of strong I_2KI is added to the agar (0.3 gm I_2 and 1.0 gm KI in 100 cc H_2O).

14 ml of 1N HCl is added.

Allow to cool and mix well.

Pollen forced from the anther into the substance will stain immediately. Mixing the pollen well before placing a cover glass (one-third size) over it insures random dispersal of grains for predetermined sweeps of the slide. Differential dispersion of aborted and viable grains to the edges of the cover glass does not take place. The gel also prevents subsequent movement of grains on the slide during the counting. Three sweeps will usually constitute over 500 counted grains in a minimal amount of time. The mixture maintains its gel and staining properties for long periods of time at room temperature, even though the color of the mixture fades.

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