Three ears were scored, and the data are given in Table 1.

On the assumption that no $\underline{lo}_x$ megaspores are functional, the percentage of recombination between Wx and $\underline{lo}_x$ is 6.1. This agrees with the previous estimate of 6 percent recombination (MNL 43). The percentage of recombination between Sh and $\underline{lo}_x$ is 13.4.

The mutants at this locus are being designated as lethal ovule-2 ($\underline{lo}_2$).

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ADDENDUM:

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1. A note on field classification of plants for pollen sterility.

I have been puzzled by reports of difficulties in classification of pollen for sterility found in heterozygotes for chromosomal interchanges in maize. Recently, when I was told about the difficulty, I found that the slide was prepared for examination with the pocket microscope by shaking pollen from a tassel on to the slide. This probably would give inconsistent readings, since varying proportions of old, shriveled pollen would be included with the newly shed pollen. Use of a fresh, nondehisced anther solves this problem.

The small pocket microscope with 40X magnification, formerly made by Leitz, is excellent, but is no longer manufactured. One similar in size (cylindrical in shape, 2.8 cm in diameter x 5 cm) and similar in operational features with slightly lower magnification was available two years ago from: Nippon Microscope Works, Ltd.,
No. 4-16, 2-chome Minami Aoyama,
Minato-Ku, Tokyo, Japan
A minimum of 12 may have to be ordered, but the cost is low. Enlarging the opening in the base with a metal reamer increases the amount of light that enters and improves its performance. This microscope is small enough to carry in one hand, holding the small glass slide between the second and third fingers of the same hand. This leaves both hands free

enough to do the needed manipulations, which may include holding the tassel while selecting the anther for the pollen sample.

Pollen classification of maize can be done rapidly in the field. The anthers begin to extrude from the glumes as the temperature rises in the morning. If too cool, extrusion can be induced by taking a floret with mature anthers and warming it in one's hand or by breathing on it. Pollen soon begins to shed normally. Nondehisced anthers full of mature pollen are easily distinguished from ones already shed. The length of time classification is possible each day depends on temperature, humidity, and wind velocity.

To prepare the slide, pick off a mature, nondehisced anther between the thumb and forefinger of one hand, e.g. the right hand, pinch off the tip of the anther with the thumb nail and forefinger of the other hand. The anther contents can be placed on the slide by squeezing the anther or by rolling it between the tips of the thumb and forefinger of the right hand. The pollen will sift out very easily. A gentle tap on the slide will spread the pollen if it is in a clump. Use the sky as the light source if needed. The top lens assembly can be screwed in or out to focus on the pollen. With practice, which includes making sterility counts under a compound microscope, estimates can be made of the degree of sterility. If the sterility is low, separate samples from additional anthers should be checked for consistency of the degree of sterility. Anthers too young but close to shedding can be classified by crushing the anther between thumb and finger and smearing it on the slide.

We mark the fertile plants by tearing off all but 2 to 3 inches of the two top leaves, and the semisterile ones with a string about two feet long looped around the top internode or by breaking off the tassel, leaving only the lower 2 or 3 branches. We mark plants that have higher or lower sterility with a white tag on which the degree of sterility is recorded.

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