Studies carried on both in the United States and in foreign countries, notably Sweden, have demonstrated the fact that timothy may be improved by the selection and isolation of the more desirable strains. As timothy is normally a cross-fertilized plant, the practical improvement of commercial varieties is somewhat more difficult than with self-fertilized crops. For this reason the greater part of the commercial seed now used in the United States is of the ordinary unselected sort.

Webber, et al (4) suggested the use of self-fertilized seed as a means of testing the transmitting ability of clonal lines. The method used to obtain self-fertilized seed as recommended by Webber, was to cover a group of about a dozen heads with a twelve-pound Manila paper bag just before blooming began. The heads were then shaken thoroughly each morning during the blooming period to insure the distribution of pollen over the pistils. Studies carried on at Minnesota have shown that some timothy plants are highly self-sterile while others are highly self-fertile. Since there is little available information regarding this question and as a knowledge of the mode of reproduction of a crop is essential to the breeder, it seemed worth while to present the results obtained.

Frandsen (1) compared the percentage of seed set under the following conditions: self-fertilization, cross-fertilization, and free-

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3 Reference by number is to "Literature cited," p. 293.