STUDIES ON METHODS FOR CONTROL OF POLLINATION IN SUGAR BEETS

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This article reviews experiments conducted at the Michigan Experiment Station to control the pollination in the production of close-fertilized sugar beet (Beta vulgaris) seed. Three methods of controlling pollination were studied, viz., space isolation of individual mother beets, enclosing mother beets within cloth cages, and covering individual seed stalks with vegetable parchment paper bags.

Ordinarily, under cultivation, the sugar beet is a biennial plant, producing a fleshy root the first season and a seed crop during the second year of its growth. Artschwager states that, "The mature inflorescence or 'seed bush' is composed of large, paniculate, more or less open, spikes bearing the flowers and later the seeds. The sessil flowers are usually in clusters of two or three which are attached to the inflorescence axis or secondary branches of the latter." The small flowers are perfect, and two or more grow together at the base to form a hard, irregular body called the seed ball. The

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3The sugar beet breeding project is carried on cooperatively by the Farm Crops Section and the Office of Sugar Plants, U. S. Dept. of Agriculture.
4The term "close-fertilized" is used to mean that pollen from a flower pollinates the stigma of another flower growing on the same plant, resulting in fertilization.
5By the term "mother beet" is meant a root harvested without removing the crown buds, stored through the winter, and planted out for seed production the second year.
6Reference by number is to "Literature Cited," p. 9.