CROSS-FERTILIZATION IN ALFALFA.¹

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Accurate and detailed knowledge as to the manner and kind of pollination in various farm crops has come to be recognized as basic for intelligent and successful breeding operations. The recognition of the stability of the genotype, at least within the time limits of practical plant breeding, makes it necessary to know as definitely as may be the character of any genotype upon which work is being performed, certainly so far as its zygotic condition is concerned.

A certain amount of work has been done on the maize plant from the above standpoint. With this plant it has been amply determined that when the ordinary genotypic condition is subject to self-fertilization the yields are reduced about 50 percent the first year as shown by Hayes (2) and a reduction of even two-thirds if the self-fertilization is carried thru several generations is shown by Jones (3). Hayes (2) has presented limited data to show the amount of cross-

¹ Contribution from the North Dakota Agricultural Experiment Station, Agricultural College, N. Dak. Approved by the Director. Received for publication August 14, 1919.