THE MODE OF POLLINATION IN SOME FARM CROPS.¹

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INTRODUCTION.

The work of the agronomist is fundamental to the development of agriculture. He it is who studies the soil in its physical and chemical relations and the farm crop plant in its response to the environmental conditions of soil and climate within which it lives. He must obtain the variety, best in quality and yield, which is suitable for those conditions. This may be done through the testing of varieties already existing in the locality, through the introduction of varieties from other parts of the world, or by the improvement of existing varieties through plant breeding. After the sorts are found best suited to the grower’s use, the seed must be multiplied and finally distributed to the grower.

In a large part of this work the nature of the pollination process is very important. If different varieties of a cross-pollinated plant are grown side by side, the purity of the seed is destroyed and the yield of subsequent generations may be temporarily affected. Introductions of so-called “varieties” may consist largely of hybrid stock. Many of these splitting forms may be undesirable and the whole introduction can with difficulty be compared with the local crop. Besides this, the introduced form is likely to cross with the local variety and the effect of a good introduction is delayed or lost.

¹ A review of the literature on the mode of pollination of the more important grain crops. Received for publication March 22, 1916.