will also be given dealing respectively with airships and with navigation, while arrangements are in hand for special instruction in air-cooled engines, high-compression engines, dopes, instruments, wireless telegraphy, and similar subjects. It has also been arranged that students will carry out part of their practical training in one or other of the government establishments concerned with aeronautics.

VARIETIES OF WHEAT

The Department of Agriculture reports that the introduction of hard winter wheat from Russia into Kansas and other states of the central Great Plains area in the early seventies was an epoch-making event. The growing of these Crimean wheats, especially the Turkey and Kharkov varieties, has been the principal cause of the prosperous development of much of that section. The development and distribution of Kanred, an improved strain of hard red winter wheat, may prove equally epoch-making in the history of Kansas. Kanred is one of the most important examples of the improvement of wheat by the method of pure line selection. It is the product of a single head, selected in 1906 at the Kansas Agricultural Experiment Station. Its true value was determined only after many years of careful experiments, but as a reward not fewer than 500,000 acres were sown in the State of Kansas alone in the fall of 1919. Since 1917, Kanred has been under experiment in many states other than Kansas. Last fall many thousands of bushels were introduced into other states for commercial growing. Kanred is unusually well adapted to many of the varying conditions in the state of Kansas. Its principal advantage over Turkey and Kharkov is its resistance to some forms of both stem rust and leaf rust. It has other advantages, however, such as slightly greater winter hardiness, earlier maturity, and makes better pasture. Those factors have caused it to outyield the Turkey and Kharkov wheats in most sections of Kansas by 3 to 5 bushels per acre. The same factors may or may not be as important in other states.

To determine the varieties of Australian wheat best adapted to conditions on the Pacific coast, the United States Department of Agriculture has conducted a series of experiments which accurately ascertained the yield and quality of those varieties already of commercial importance in that region, as well as other varieties, samples of which were brought direct from Australia. In connection with the latter phase of the investigation more than 130 samples of wheat were obtained, representing 92 distinct varieties. Results from the early experiments with these wheats show that the "Federation group," consisting of three varieties, Federation, Hard Federation, and White Federation, is probably the best suited to this western region. These three varieties were compared in yield with the leading commercial wheats, including the Bluestem, Australian varieties, Pacific, White Australian, and Early Baart, and produced higher yields, according to the department's cereal specialists. Hard Federation produced the larger yields in Oregon, while White Federation did better in California. Milling experiments indicate that Hard Federation is equal or superior for milling and bread-making purposes to the leading commercial varieties now grown on the Pacific coast and also superior in this regard to Federation and White Federation.

LECTURES AT THE NEW YORK BOTANICAL GARDEN

Free public lectures are being delivered in the lecture hall of the museum building, Saturday afternoons, at four o'clock, as follows:

Sept. 4. "How to can fruits and vegetables," Professor H. D. Hemenway.

Sept. 11. "What Columbus saw in the new world," Dr. W. A. Murrill.

Sept. 18. "National losses due to plant diseases," Dr. M. T. Cook.

Sept. 25. "Dahlias and their culture," Dr. M. A. Howe.

(Exhibition of Dahlias, Sept. 25 and 26)

Oct. 2 "Nuts and other food crops from trees," Dr. W. C. Deming.

Oct. 9. "Evergreens," Mr. G. V. Nash.

Oct. 16. "Autumn colors," Dr. A. B. Stout.