tugal, Italy, Germany, England, Ireland, Belgium, South America and even remote Australia.

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SCIENTIFIC EVENTS

TRIBUTE TO THE MEMORY OF JAMES WILSON

SYMPATHY at the death of former Secretary of Agriculture James Wilson was sent to his family in the form of a resolution adopted at a meeting of the chiefs of the various bureaus of the United States Department of Agriculture. Tribute was paid to the former head of the department for "his patriotic devotion to the interests of all the people, his broad vision, and his practical wisdom." As a token of respect the flags on all department buildings were placed at halfstaff, and remained so until after the funeral, which took place at Traer, Iowa.

Because of the time of the funeral, the department was unable to send representatives from Washington. The department, however, designated Dr. Henry C. Taylor, Chief of the Office of Farm Management, who was in the Middle West; Frank S. Pinney, Federal agricultural statistician at Des Moines; and R. E. Doolittle, Chief of the Central Food and Drug Inspection District at Chicago, to represent it at the funeral.

A floral tribute was sent by officials and employees of the department as a token of esteem for their former chief. The message of sympathy sent the family of Mr. Wilson followed a similar personal message sent by Secretary of Agriculture Meredith. The resolution of the bureau chiefs, forwarded by Assistant Secretary of Agriculture Ball, read:

> The members of the Department of Agriculture, feeling deeply the loss of their former secretary, James Wilson, of Iowa, desire to express their sympathy with his family and their appreciation of his great services to the United States as Dean of Agriculture, member of Congress, and Secretary of Agriculture. His patriotic devotion to the interests of all the people, his broad vision, and his practical wisdom place him high among those who have deserved well of their country. Beloved as a friend, admired and respected as an official, his example as a man and a statesman is one to which all Americans may turn for inspiration and emulation: Therefore be it
>
> *Resolved,* That in the death of James Wilson American agriculture has lost one of its greatest exponents and American citizenship one of its finest exemplars.
>
> In token of respect the flags on all department buildings will be placed at half-mast, and a copy of this resolution will be sent to the family.

RESEARCH IN AVIATION

AN addition has been made to the activities of the Imperial College at South Kensington in the establishment of a new department of aeronautics. The movement was initiated by Sir Basil Zaharoff's endowment of the University of London chair of aviation, to which Sir Richard Glazebrook was appointed, with the duty of directing the new department.

The London *Times* states that the department was established to give effect to the scheme proposed by the committee on education and research in aeronautics in their report, dated December 12, 1919, in which the opinion was expressed that the Imperial College should become the central school for advanced study in aeronautical science. The school is administered by an advisory committee of twelve members, with Sir Arthur Acland as chairman, representing the college, the air ministry, the aeronautical research committee, the University of Cambridge, the Royal Aeronautical Society, and the Society of British Aircraft Constructors.

A comprehensive scheme of instruction and training, mainly post-graduate in character, has been arranged for next session beginning in October, including special sections in aeronautical engineering, meteorology and navigation, and with the cooperation of the Air Ministry the services have been engaged of a distinguished staff of experts. Sir Napier Shaw will be professor of meteorology; Mr. Leonard Bairstow, professor of aerodynamics; Mr. A. J. Sutton Pippard will deal with the structure and strength of aircraft, and Mr. A. T. Evans with the aircraft engines. Courses of lectures

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.