



PROF. CHARLES EDWIN BESSEY

BIOGRAPHY

## Science Meeting Honors Memory of Pioneer Botanist

**H**ONORING the work of a pioneer in American botanical science and to evaluate present efforts in that field, scientific and agricultural leaders, among them Secretary of Agriculture Henry Wallace, attended a two-day meeting at Iowa State College on Nov. 15 and 16.

Sixty years ago the late Prof. Charles Edwin Bessey developed his botanical Laboratory at Ames which became a focus of modern teaching and research in the plant sciences. He pioneered botanical science in the West, carrying into the then raw territory beyond the Mississippi the intellectual ferment and the new and critical methods of research developed in Europe by such famous figures as Pasteur and Darwin, and in the eastern United States by the great botanist Asa Gray. A tangible monument of Bessey's methods and equipment was shown at the meeting: it is his compound microscope, specially built at the then astounding cost of \$1,200, and used in the instruction of many college generations of students. This instrument is now one of the most cherished historical treasures of Iowa State College.

A prominent part in the discussion of modern methods in the propagation of knowledge about plants was taken by Prof. Bessey's own son, Dr. Ernst A. Bessey, who is also a professor of botany, at Michigan State College. Oth-

er speakers on the program included Prof. I. E. Melhus, who now occupies Prof. Bessey's chair at Iowa State College, and Prof. R. J. Pool of the Uni-

versity of Nebraska, whither Prof. Bessey went after he had founded his pioneer laboratory at Ames.

*Science News Letter, November 24, 1934*

AGRICULTURE

## Special Corn Varieties for Special Uses, Possibility

**C**ORN will not be "just corn" to future generations of farmers. Scientific breeding may be expected to produce special kinds for each different purpose, Secretary of Agriculture Henry A. Wallace suggested at the conclusion of an address before a national audience of scientists, gathered at Iowa State College to commemorate the founding of the pioneer laboratory in modern plant science sixty years ago, by the late Prof. Charles Edwin Bessey. In his address Secretary Wallace reviewed the history of corn breeding during the same six decades, and concluded with a look into the possible future.

He outlined some of the things that might be undertaken:

"We shall need experiments to discover whether or not it is desirable to have softer textured strains of corn in order to promote greater ease of mastication by hogs, or whether such problematical advantage in softness may be offset by lower protein content and by susceptibility to disease and lower yields. Is there any advantage in increasing or decreasing the oil content in corn from the standpoint of the maximum utilization by livestock?"

"Perhaps the time is now approaching when the corn breeders should cooperate more and more with those who are concerned chiefly with the use of corn. Possibly we shall come eventually to think of one type of corn as hog corn to be fed on the ear, another type as cattle corn to be fed ground, and still another type as commercial corn especially adapted for human cornmeal, or starch corn for the wet process of corn manufacture."

The history of corn breeding, as outlined by Secretary Wallace, is divisible into four periods. Before 1896, corn breeding was chiefly in the hands of practical farmers. From 1896 until 1910, colleges and experiment stations assumed the leadership, especially by means of "corn shows."

From 1910 to 1920 a more scientific attitude marked the efforts of corn breeders, though even then the modern principles of genetics, discovered by Gregor Mendel, were not brought into effective use.

From 1920 on, corn breeders have been employing mendelian principles. This work was pioneered as early as the period 1905-1910, by Drs. G. H. Shull and E. M. East. The practical application of their results, however, was carried out by other men, prominent among whom has been Henry Wallace himself—though he omitted any mention of that fact in his address.

Secretary Wallace's feeling toward corn goes beyond the emotionless objectivity of the laboratory. He said:

"Those who have worked with corn and studied it in all its intimate details for many years realize that corn is not merely corn. It is a composite of many things and can be molded in many directions. The possibilities with corn are almost as infinite as with humanity itself . . . The future is limitless as long as our desires are keen and our minds open."

*Science News Letter, November 24, 1934*

ZOOLOGY

## Beavers Disable Lighting Plant in Yellowstone Park

**Y**ELLOWSTONE Park's hydroelectric plant, which supplies the headquarters settlement at Mammoth Hot Springs with electricity, recently developed "beaver trouble." Its water supply failed, and the plant had to shut down.

Trouble-shooters hot-footed it out along the intake pipe line. At its upper end they found a new beaver dam, built right on top of the protecting grating.

*Science News Letter, November 24, 1934*