

# SCIENCE

VOL. LXXII

FRIDAY, DECEMBER 5, 1930

No. 1875

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SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. MCKEEN CATTELL and published every Friday by

## THE SCIENCE PRESS

New York City: Grand Central Terminal

Lancaster, Pa.

Garrison, N. Y.

Annual Subscription, \$6.00

Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

## THE RELATION OF SCIENTIFIC RESEARCH TO AGRICULTURAL PROGRESS<sup>1</sup>

By Dr. A. F. WOODS

DIRECTOR OF SCIENTIFIC WORK, U. S. DEPARTMENT OF AGRICULTURE

A HALF century of service in finding and proclaiming facts underlying agriculture is a record worthy of the highest commendation. The world as well as the nation and the state have felt the helpful influence of the work of this station. It has been in the past and is to-day an active, helpful unit in the great federation of workers, ever seeking by new and improved techniques and clearer vision to give man surer control of those factors of his environment that make up what we call agriculture. It is a wide field, involving almost the whole range of our physical and biological environment, including man himself.

We may well pause at this half-century mark and ask how much we have gained through the development of natural sciences bearing on agriculture.

<sup>1</sup> Address at the celebration of the fiftieth anniversary of the founding of the New Jersey Agricultural Experiment Station, October 8, 1930.

A half century ago it looked to the best scientific minds as if increase in population would overtake and pass our power to produce food to meet the need. The zero hour was set at about 1933. The day is here. Populations have increased at about the ratio figured, but we can feed them all to-day more easily and cheaply than we could at any time in the past. There is less famine, less suffering, less hard work, and more leisure than ever before. The reason is that we have more accurate knowledge of the factors that must be controlled and we control them better than ever before in the history of man. This knowledge we have gained step by step through carefully planned experiments and the development of what we call scientific method, which is simply a method of trial by which we are able to measure and control each step or process and thus find the true relation of each factor under each set of controlled conditions.

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