

## SCIENCE NEWS

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## A SCHOOL OF PAN AMERICAN AGRICULTURE

AT Zamorano, Honduras, a school of Pan American agriculture was formally opened on October 12, to provide technical education in American tropical agriculture particularly for students from Mexico, Central America and the West Indies. Its faculty includes scientists and educators from Middle America and from the United States.

Escuela Agricola Panamericana is the official name of the new institution. It will be conducted as a practical work-while-learning laboratory, furnishing free and expert technical training to a permanent enrollment of at least 160 young men carefully selected from Middle America.

When their training is completed students are expected to apply their technical knowledge and experience to the problems of their home lands.

The opening of this school is an event of more than local interest. As a result of the war Middle America is now supplying the United States with products formerly obtained in the Far East, and will probably continue to do so in the future because of the great agricultural developments that have already taken place. The Western Hemisphere may become agriculturally self-sufficient. To promote this self-sufficiency is one of the objectives of the new institution.

The Escuela Agricola Panamericana was founded and endowed by the United Fruit Company, but will be divorced from the personnel requirements of any particular company or commercial employer. It will function under a board of regents, five of whom are Central Americans. Its establishment and location were authorized by the National Congress of Honduras.

## ITEMS

AMATEURS interested in rediscovering Comet Berry, discovered at Dunedin, New Zealand, the middle of September, should search in the constellations of Crater, the cup, Leo, the lion, and Sextans, the sextant, according to calculations made at Aberdeen, Md., by L. E. Cunningham. "The comet is likely to appear as a faint, fuzzy patch of light, and can be distinguished from the many nebulae in the region by its motion past the stars. When this motion has been definitely proved, the position should be reported to the Harvard College Observatory." Since its discovery on September 13 the comet has moved into the part of the sky near the sun and is lost in the twilight. A cablegram from the Carter Observatory, Wellington, New Zealand, sent in reply to a request from Mr. Cunningham, states that the comet was last observed on September 16. At the time of its discovery, it was of the fifth magnitude and so was faintly visible to the naked eye. Three days later, however, it had faded to the sixth or seventh magnitude, and required a small telescope to see it. Unless the comet is accidentally rediscovered after it emerges from the morning twilight, its orbit will remain unknown.

A NEW advance in the design of frequency modulation receivers reduces interference from undesired stations in the reception of FM radio programs, according to George L. Beers, of the Radio Corporation of America, the inventor. The FM receiving system represents a new approach to the problem of reducing noise and interference. Known technically as a "frequency-dividing locked-in oscillator FM receiving system," it consists of an oscillator which automatically adjusts its frequency to the frequency variation of the signal of the desired FM transmitter. "Frequency modulation," Mr. Beers pointed out, "is still in its infancy in terms of a nationwide entertainment service. Until a large number of high-powered FM broadcasting stations are operating on a commercial basis, the major technical problems which are involved in the design of FM receivers will not be fully appreciated."

GAS turbine engines for aircraft, approaching as much as 10,000 horsepower, may be available within the next decade, according to G. W. Vaughan, president of the Wright Aeronautical Corporation. While the principles of gas turbines have been known for years, it was only recently that research has improved their efficiency to a point of practical use and only recently that advances in metallurgy have provided the metals to withstand the heat and power stresses of such engines. In the high-power range, the gas turbine has many advantages. It offers a large saving in weight and fuel consumption for long-range operation at high altitudes. On a giant transport plane of the future, the gas turbine engine may mean a saving of as much as 8,000 pounds over present types of engines, permitting about forty more passengers, or four extra tons of cargo, to be carried on each flight. The use of the gas turbine engine is therefore expected to make possible sharp reductions in passenger fares and cargo rates.

NATURAL gas has been found non-injurious to growing plants and cut flowers, in experiments by Professor Felix G. Gustafson, of the University of Michigan. In this it is radically different from manufactured gas, which has long been known to be harmful to plants growing in homes and greenhouses, as well as to certain kinds of cut flowers. Potted plants of tomato, coleus, sunflower, snapdragon, marigold and several other species, as well as cut flowers of tulip, carnation and stock, were placed under bell-jars. In some of the bell-jars from one to two per cent. of Texas natural gas, taken directly from the pipe line, was added to the atmosphere. Other jars were left with only ordinary air in them, as controls. Although the plants were exposed to the natural gas for several weeks, none of them developed detectable injury in the one per cent. gas atmosphere, and only two of the cut specimens of plants showed damage in the two per cent. concentration. As a further check, manufactured gas was added briefly to some of the bell-jars containing natural gas. The plants promptly showed signs of gas injury, but recovered when the manufactured gas was taken out and only natural gas remained.