

## AGRICULTURE

**Premature Blossoms  
Now Controlled**

► THE PRECOCIOUS fruit blossoms that burst forth early only to be caught by late spring frosts are now subject to chemical control.

Spraying a chemical upon raspberries and strawberries can delay temporarily their blossoming, Prof. David G. White of Pennsylvania State College has discovered.

Enormous losses to the fruit industry may be prevented through the application of this method of delaying flowering 10 days or more to avoid dangers of frost, Dr. White suggests in a report to the journal, *SCIENCE* (March 24).

The chemical used is maleic hydrazide in its diethanolamine salt applied in a water spray of 1,000 to 1,500 parts per million. These lower concentrations produce the effect without burning the foliage.

Both strawberries and black raspberries were treated last spring successfully, without permanent effect on general growth. Dr. White's experiments followed the discovery at Cornell's New York State College of Agriculture of the temporary inhibiting effect of maleic hydrazide on plant growth.

*Science News Letter*, April 1, 1950

## MEDICINE

**Finger-tip Test for  
Pain Killing Drugs**

► A FINGER-TIP test for the effectiveness of pain-killing drugs has been developed by Arthur M. Schwartz, William K. Sata, and Daniel Laszlo at Montefiore Hospital, New York City.

The test is made by measuring the blood flow in a finger tip with an instrument called a plethysmograph while a brief electric shock is given at regular intervals to the back of the foot. Changes in blood flow brought on by this painful stimulus are then compared with changes for the same stimulus when morphine, codeine or other pain-relieving or anesthetic drug is given.

Details of the test are reported in *SCIENCE* (March 24).

*Science News Letter*, April 1, 1950

## AGRICULTURE

**Coal-Eating Pigs  
Cost More to Raise**

► A COMMON belief among farmers that eating coal is good for pigs has been proven erroneous by scientists at the University of Wisconsin.

Experiments made by Robert H. Grummer, Gus Bohstedt and James H. Meyer, of the animal husbandry department, showed that while pigs like to crunch coal, doing so makes them less thrifty. It also fails to protect them from roundworms or from necrotic enteritis, a disorder of the intestines more commonly known as "necro."

Many farmers have thought that it did.

In the tests, some pigs were given free access to soft and hard coal, and they ate from a fifth to a quarter pound a day. It was found that the soft coal, in particular, made the pigs consume more feed per pound of gain.

At the end of the tests, it had cost \$1.15 more to put on 100 pounds of gain for the pigs that had eaten the soft coal. For the pigs eating hard coal, it cost 42 cents more to gain 100 pounds than the check lot without coal.

*Science News Letter*, April 1, 1950

## AERONAUTICS

**Drift Method Navigation  
Saves Time and Cost**

► THE SHORTEST route for airplanes crossing the Atlantic is not always the quickest path. What is called the "average drift correction" method of navigating, which utilizes wind movements, saves time and cost, aviators have proved.

By means of the average drift method of navigation, airliners instead of bucking beam winds travel along with them. The pilot makes use of a forecast flight plan. This begins with the sketching of an upper air chart, projected for the expected time of the flight, that shows weather conditions 10,000 feet and higher across the Atlantic.

The algebraic sum of the beam winds that will be encountered during the entire flight is calculated and an average correction for drift is computed. This correction will usually be applied to the great circle headings during flight.

Flying the resulting headings, the aircraft is allowed to drift off its course with the wind. As it passes through the various pressure fields, the drift may be to the right or to the left, but when the craft reaches its destination it is "on course."

The time saving has been definitely proven, according to Lyle E. Brosche, La Guardia Field, senior meteorologist for Pan American World Airways. He reports the recent experience of three DC-4's, operated by three different international airlines which took off within an hour from Gander Field, Newfoundland.

One took the great circle or shortest route. One took what is called the rhumb line course, a single heading more southerly than the great circle route. The third used the average drift method with charts showing the winds and weather over the Atlantic, prepared by the Pan American meteorologists.

Elapsed time to reach London showed the "great circle" plane took nine hours and 15 minutes. The "rhumb line course" plane took 10 hours and 12 minutes. The user of the average drift method of navigation made the trip in eight hours and 38 minutes.

This is but one example. Pan American officials state that in less than two years the average drift correction method of navigation has saved the company more than half a million dollars.

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**IN SCIENCE**

## PSYCHIATRY

**14-Year-Old Boy  
Sneezes for 33 Days**

► THE CASE of a 14-year-old school boy who sneezed from 3 to 30 times a minute for 33 days is reported by Dr. Neville Murray of the Banstead Hospital, Surrey, and Dr. Joshua Bierer of the Runwell Hospital, Essex.

The doctors could not find any report of any other case of sneezing of such long duration.

Cause of the sneezing, the doctors determined, was a conflict situation. The boy, though intelligent and ambitious, was forsaken by his father, overprotected by his neurotic mother and overshadowed at school and at home by a brilliant younger brother.

Escape from this grim reality came through the sneezing which gave him four gains: 1. He did not have to continue the unfair competition at school, bets being laid by his classmates on the number of seconds between sneezes. 2. He became the center of attraction at school, bets being laid by his classmates on the number of seconds between sneezes. 3. He aroused the sympathy and concern of his parents. 4. He became the sensation of the world press.

The sneezing rapidly became less frequent and finally stopped when the boy was told and convinced that he need not go back to school. But the doctors do not consider him cured and he is still under psychiatric treatment, they report to the *BRITISH MEDICAL JOURNAL* (March 4).

*Science News Letter*, April 1, 1950

## ENGINEERING

**Electricity to Half  
Million More in '49**

► HALF a million more American farmers got electricity for the first time in 1949 under the Government's rural electrification program.

Power lines that would reach seven times around the world if strung end to end were added in out-of-the-way areas, Claude R. Wickard, Rural Electrification Administrator for the Department of Agriculture, reported.

Most of the lines built with REA funds are cooperatively owned by the farmers serviced, he said. Early in 1950 the total of REA loans passed the two billion dollar mark. Total number of consumers passed 3,000,000.

Today, says Mr. Wickard, more than 83% of American farms have electricity. Only about 10% had power when REA started 15 years ago.

*Science News Letter*, April 1, 1950

# E FIELDS

## GENERAL SCIENCE

### Conference Expected to Cut Security Rules

► A SENATE-House conference committee is set to cut two drastic security provisions out of the House version of the National Science Foundation bill.

Even though the conference committee has not yet been officially appointed, the prospective members, backed by a letter from the Justice Department, are ready to delete House amendments calling for FBI investigation and evaluation of the loyalty of Foundation employees and scholarship holders.

Rep. Percy Priest, D., Tenn., said that it was his guess that the bill as it emerges from conference would not go beyond the regular provisions of existing law for non-sensitive government agencies. Rep. Priest managed the fight for the bill on the House floor.

However, a third security provision requiring that scholarship holders sign a loyalty affidavit will probably remain in the bill. Persons who have held scholarships under other government programs have not been considered employees of the government and, therefore, not subject to the usual loyalty investigation.

Rep. Priest said he thinks that "maybe the loyalty affidavit will be enough."

It is not believed that the conference committee will meet until after April 1.

Science News Letter, April 1, 1950

## METEOROLOGY

### Every Major City May Face Serious Water Shortage

► EVERY major city in the country may some day be faced with a serious water shortage, an official of the U. S. Geological Survey warns.

Dr. A. Nelson Sayre, chief of the Survey's groundwater branch, told the Geological Society of Washington that U. S. water consumption has increased "almost unbelievably" in the last 100 years.

The per capita rate has jumped from a few gallons a day to more than 700 for every man, woman and child, he said.

Yet the Government's data show the country's water resources underground are limited in any particular area, he pointed out. Wet years or dry years may cause some fluctuation. But in the long run there is no detectable change in the net amount of water available underground.

New York's prolonged drought, which

has forced the city to try rain-making experiments to relieve its shortage, really caused no more than "a little bump on its water supply curve," Dr. Sayre said.

New York "for some years" has been exceeding its water-collecting facilities by about 12%, he explained.

As other large cities grow or increase their water consumption, according to Dr. Sayre, they may begin competing with each other for underground water. Cities in the Southwest are already facing that problem, he reported.

The answer? U. S. geologists must collect more basic data on water resources. And, Dr. Sayre added, cities must consider the amount of water available before allowing too much water-gulping industrial expansion.

Science News Letter, April 1, 1950

## AGRICULTURE

### Milk from Cows Given Mold Drugs Not Good for Cheese

► MILK from cows being treated with penicillin or aureomycin apparently kills starter organisms used by cheesemakers and cannot be successfully used in making cheese, according to evidence collected by scientists of both the University of Wisconsin and the State Department of Agriculture.

University scientists headed by Dr. G. R. Spencer, of the veterinary science department, are studying the problem. Reports from Wisconsin cheesemakers revealed that trouble with milk in their vats during the curdling process had been traced to milk from cattle being treated for mastitis, an udder disease of dairy cows. This disease is now treated with penicillin or aureomycin.

Dr. W. V. Price, of the university's dairy division, said the drugs halt the growth and upset the normal bacteria necessary in good cheese production. While not toxic, milk from cows being so treated presents problems in all types of cheese so far tested.

Dr. J. T. Schwab, chief of the livestock sanitation division of the Wisconsin Department of Agriculture, advises that milk from cows being treated with penicillin or aureomycin should not be marketed during the treatment and for a period of three days after the treatment has been stopped, because small amounts of the drugs get into the milk. Such milk can be fed to calves, pigs or chickens, he said.

Science News Letter, April 1, 1950

## MEDICINE

### False War Rumor Led To Cortisone's Discovery

► A FALSE rumor that the German Luftwaffe was buying adrenal cortex glands of cattle from Argentina during the war was the start of research that gave the world cortisone, effective in treating arthritis.

This was revealed by Dr. Edward C. Kendall, of Mayo Clinic, co-discoverer of this gland drug, in a lecture.

Science News Letter, April 1, 1950

## PSYCHOLOGY

### Feeling of Pressure May Be Mental Sensation

► SCIENTISTS classify touch and pressure as different human sensations. They study the nervous system of the body to learn the differences.

A Canadian professor suggests, however, that the feeling of pressure may be a mental concept rather than a direct sensation in the nerves.

Experimental evidence to back up this theory has been presented to the Royal Society of Canada by Dr. I. MacLaren Thompson, professor of anatomy at the University of Manitoba, and research associates L. W. Denny, H. S. Kimball and J. C. Luce.

Dr. Thompson, a Fellow of the Royal Society, has studied differences in the sensations of pressure and touch since 1933. He reports results of a long series of experiments with human subjects, involving nerve stimulation by electricity and other means.

The experiments tend to support the idea of pressure as a mental concept, he says.

"If this is correct, then the specific mechanism responsible for the feeling of pressure lies not at the periphery (of the body) but in the brain," Dr. Thompson concludes.

Science News Letter, April 1, 1950

## PHYSIOLOGY

### Three Bottles of Beer Make Driving Dangerous

► AS little as three bottles of beer can make a person a dangerous driver, two Swedish scientists have reported to the QUARTERLY JOURNAL OF STUDIES ON ALCOHOL (March) published by Yale University.

Two groups of expert drivers went through special tests designed by Dr. Leonard Goldberg and Kjell Bjerver of Stockholm's Karolinska Institute.

One group had nothing to drink. The other drank three to four bottles of beer or about half a glass of Swedish "brannvin"—the alcoholic equivalent of three or four ounces of American whiskey. Both groups went through the same tests twice.

The non-drinkers improved their performance by 20%, report the two pharmacologists. But the alcohol group showed 25% to 30% deterioration in their driving ability compared to their performance before they drank.

Concluded Dr. Goldberg and Mr. Bjerver, "The role that alcohol plays in causing traffic accidents is probably considerably greater than appears from official statistics. Its action as a factor in traffic accidents begins at a lower alcohol value than has previously been considered."

Science News Letter, April 1, 1950