

AGRICULTURE

# Wheat to Withstand Droughts Being Sought for Canada

## After Conquering Disastrous Rust Disease, Scientists Work for Varieties to Overcome Cause of Recent Losses

**I**N THE STRUGGLE to produce an abundance of wheat, which continues despite the surpluses that depress prices, the farmer of the Canadian and American northwest fights rust and drought.

The great plains of the American continent have been turned into the bread basket of the world in the course of less than a hundred years of development of the business and science of growing wheat.

The way in which scientists searched out the best seed wheats of other lands and then bred them to give larger, better, and more reliable crops is one of the great epics of the revolutionized world created by the nineteenth and twentieth centuries.

Canada's prairie provinces are great fields of wheat. There it is staff of life to pocket-books.

When wheat is threatened, the life of Canada is threatened. Scientists have attacked vigorously the enemies of wheat.

One enemy, rust, has cost Canada a hundred million bushels of wheat in certain epidemic years. It is not the rust of iron, but a fungus disease of grain, carried in minute spores that can be transported many miles thousands of feet high in the air by winds and storms. The defense is to grow wheat that does not fall ill to this fungus disease called rust.

Just as hardy varieties of wheat from Russia and the Himalayas were cross-bred to produce the famous Marquis wheat, so the wheat improvers of today are manufacturing to order through their science new kinds of wheats that will resist rust and grow in dry years.

These breeders of wheat are intellectual descendants of Dr. William Saunders, and his sons, C. E. and A. P. Saunders, who just before and after the turn of the century carried on wheat research that developed the famous Marquis variety.

This year as the fruit of a ten-year program guided by a Canadian National Research Council committee, it was announced that a rust-resistant variety of wheat would be available for distribution to farmers within two or three years.

This is a major victory for the food fighters.

Drought, the enemy of wheat that has reduced yield of the Canadian prairies by a hundred million bushels during each of the past two years, is the next antagonist of wheat to be tackled.

Using the same sort of technique, improving the wheat rather than trying to reform the weather, a comprehensive investigational program into drought resistance is under way at the University of Alberta and the University of Manitoba. Hints and information from Russia and the United States are being used freely. Greenhouses at the University of Alberta have been converted so as to manufacture miniature chinook winds, hot and dry, that often blow down the Rocky Mountain passes onto the Canadian wheat plains.

New wheats, living on less water, will be born and bred in this research.

What Canada discovers will also prove useful in the wheat fields of Manchuria, Russia and other parts of the world. New seeds, like new ideas, are not restrained by political boundaries.

*Science News Letter, August 13, 1932*

BOTANY

## Leaves of "Spanish Needle" Used in Hawaii as Tea

**L**EAVES of plants of the same genus as the common American weed known as "Spanish needle," which adorns the garments of picnickers with disagreeably clinging pronged seeds, were used by the natives of Hawaii for tea, reports Otto Degener, naturalist of Hawaii National Park. It was known by the native name kokoolau.

To make it, the Hawaiians put some of the dried leaves into a gourd or wooden vessel and added water, then dropped in a heated stone, keeping the water simmering until the tea was judged to be strong enough. It was then strained through a coco fiber mat, and drunk either plain or sweetened with the juice of the native sugar-cane.

*Science News Letter, August 13, 1932*

# 7 GREAT SCIENTISTS

**1** DR. ROBERT A. MILLIKAN, Nobel prize winner in physics, leader in scientific thought and head of the California Institute of Technology, speaks on "The Rise of Physics."

**2** DR. JOHN C. MERRIAM, authority on the fossil animals and reptiles of western America, president of the Carnegie Institution of Washington, speaks on "The Record of the Rocks."

**3** DR. EDWIN G. CONKLIN, Princeton University biologist, one of the world's greatest authorities on life processes, speaks on "The Mystery of Life."

**4** DR. KARL T. COMPTON, eminent physicist, president of the Massachusetts Institute of Technology, speaks on "Science and Engineering."

**5** DR. LEO H. BAEKELAND, industrial chemist and one of America's industrial pioneers, inventor of bakelite, velox, etc., speaks on "Chemistry and Civilization."

**6** DR. WILLIAM H. WELCH, of Johns Hopkins University, "Dean of American Medicine" speaks on "The Tubercle Bacillus."

**7** DR. WILLIAM M. MANN, director of the National Zoological Park of the Smithsonian Institution, leading authority on animal life, speaks on "Our Animal Friends."

## THEY WANT TO TALK TO YOU IN YOUR OWN HOME

**S**CIENCE is absorbingly interesting. Scientists bring forth new points of view, new discoveries, new relationships of old discoveries, and thus they themselves are absorbingly interesting as human beings.

Men and women of intellectual curiosity would like to entertain many of these scientists, one by one, in their homes, but this is usually impracticable.

**A** SO Science Service, Inc., asked seven great scientists to make phonograph records on subjects which fired them with enthusiasm.

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