SCIENCE NEWS

Science Service, Washington, D. C.

PENICILLIN AND PSITTACOSIS

HOPE that penicillin may prove a remedy for psittacosis and the related disease, ornithosis, is held by Dr. F. R. Heilman and Dr. W. E. Herrell, of the Mayo Clinic at Rochester, Minn., on the basis of experiments with mice.

Psittacosis, or parrot fever, became generally known in this country in the winter of 1929–1930 during an outbreak in which almost one fifth of the patients died. Chickens, doves and many types of finches and pigeons as well as parrots may be infected with the virus of the disease. This has led to the adoption of the name ornithosis for the sickness in man when it is not definitely due to association with parrots or lovebirds.

The ornithosis virus may frequently cause atypical pneumonia in man, according to findings by a number of physicians. So far, no remedy, including the sulfa drugs, has proved effective in ornithosis in man or laboratory animals.

In their tests with mice, 80 animals were inoculated with the virus of ornithosis. Of 40 that were not given penicillin, 35 died. Of 40 treated with penicillin, only two died.

"The results of these studies and the close relationship between the strains of the viruses of ornithosis and psittacosis make it hopeful that penicillin will have a favorable therapeutic effect on these virus infections in man."

The penicillin used in the experiments was provided by the Office of Scientific Research and Development from supplies assigned by the committee on medical research for experimental investigations recommended by a committee of the National Research Council.

FOOD SUPPLIES IN GERMANY

DR. J. H. RICHTER, of the Office of Foreign Agricultural Relations, U. S. Department of Agriculture, stated in the official publication, *Foreign Agriculture,* that, in his opinion, Germany's production and consumption of food thus far in this war have been at a level far above those for 1914–1918.

"In contrast to the situation in 1914, Germany's food economy in 1939 was well prepared for war. Following a period of sustained expansion, agricultural production had reached a high level. Over 85 per cent. of the nation's food supply was produced from domestic resources, the only substantial deficit being in fats and oils. From 1937 until the outbreak of war, stocks of grain, fats and sugar had been accumulated in considerable quantities." In the years just prior to World War I, German livestock was dependent upon the importation of feed to the extent of about 38 per cent. of the total output of livestock products. In 1939 the dependence on imported feeds was not more than 10 per cent., with the result that livestock production has been considerably less affected in the past four years than during the 1914–1918 period.

An important factor in the high level of farm production was the relatively large supply, up to 1943, of commercial fertilizers other than phosphates. Especially important was the availability of nitrogen in quantities six or seven times as great as in the previous war. "This excess, even after allowance has been made for the drastic reduction in phosphates, may still be estimated as accounting for an annual crop production of over 6,000,000 tons in terms of grain."

In the opinion of Dr. Richter, Germany's own production has remained the backbone of its wartime food supply, despite the importation of substantial quantities requisitioned in other parts of continental Europe under German control.

ITEMS

PINK bollworm, one of cotton's worst insect enemies (the other is boll weevil), has been found in Louisiana, according to the U. S. Department of Agriculture. Hitherto this pest has been known only from portions of Texas, New Mexico and Arizona. Because of the immediate seriousness of the situation, extension of quarantine regulations to include Louisiana is under consideration. A hearing to consider the matter was planned to be held in the Federal Building at Memphis, Tenn., on March 1.

ALMOST one and a quarter billion pounds of waterproof paper will compete with metal and wood containers during 1944. Large amounts are used for waterproof tarpaulins for landing posts and beachheads. About 8,000,000 to 10,000,000 pounds of the waterproof paper are used each month for shell cases alone. Since there will be no adequate indoor storage for about 70 per cent. of the supplies they are being shipped to liberated countries abroad in waterproof shipping bags. Demands for waterproof paper have nearly doubled since last August, largely because of the requirements of our armed forces, according to G. E. McCorison, of the War Production Board's Paper Division. Paper is wet-proofed by several different processes. Asphalt is used to laminate sheets of paper. A water-repellent coating is applied to paper. Or paper is given wet-strength by the addition of a synthetic resin to the pulp. All these processes make it possible to leave paper bags and their precious contents in the open without fear of the elements.

DR. EDWIN J. COHN, of the Harvard Medical School, recently reported to the New York Section of the American Chemical Society that from the proteins in blood plasma it has been possible to make plastics, films and foams for clinical use, as well as the more familiar immune globulin for measles prophylaxis and isohemagglutinins for blood typing. The plastics are made from fibrinogen, the substance in blood upon which the physical properties of the blood clot largely depend. In connection with thrombin this can be made into fibrin films used as membranes, and into the fibrin foams used to check bleeding in surgery on the nervous system. Albumin from blood, also available now as a stable, dry, white powder, is put up in a 25 per cent. water solution in the 100 cubic centimeter Army-Navy package and used for treatment of shock. This approximately three-ounce solution is equivalent to a pint of blood plasma.