

BIOLOGY-MEDICINE

Biological Warfare

Preparations made by U. S. in top secret research. Japanese also developed germs for offense, but disease weapons were not used in World War II.

By **WATSON DAVIS**

► **ADD GERMS** to the atomic bomb, rockets and other new weapons that can be expected to be used in any future wars.

The War Department released a report on America's extensive preparations to combat and undertake biological warfare. These researches undertaken by nearly 4,000 scientists, Army and Navy personnel, in four war laboratories in Maryland, Mississippi, Utah and Indiana, were "top secret" even after V-J day until the announcement.

Biological warfare was not used by the United States. While intelligence reports after the Japanese occupation showed that the Japanese army fostered offensive developments in this kind of warfare from 1936 into 1945, the report states there is no evidence that the enemy ever resorted to this means of warfare.

The biological warfare report, made to the Secretary of War by George W. Merck, special consultant for biological warfare, is notable in not mentioning any specific disease by name.

But it does define biological warfare as "the use of bacteria, fungi, viruses, rickettsiae and toxic agents from living organisms to produce death or disease in men, animals, or plants." These agents are distinguished from synthetic chemicals used as gases or poisons, or what is usually called chemical warfare. Biological warfare thus has a very wide scope.

Used in World War I

The report declares that biological warfare was used in World War I, and that "there is incontrovertible evidence that in 1915 German agents inoculated horses and cattle leaving the United States ports for shipment to the Allies with disease-producing bacteria."

The possible use of biological warfare was brought to the attention of the War Department in the fall of 1941 and Secretary Stimson requested a National Academy of Sciences committee to survey the situation and future possibilities.

A supersecret committee called the War Research Service was organized in the summer of 1942 to take charge of biological warfare investigations. Work-

ing with the Army, Navy, U. S. Public Health Service, the National Academy of Sciences, the National Research Council, OSS, FBI and other agencies, this organization asked the Chemical Warfare Service of the Army to take over a large-scale development and research program in November, 1942. The first laboratories and pilot plants were begun in April, 1943, at Camp Detrick, Frederick, Md. Subsequently, field testing stations were established in Mississippi and Utah and large scale production was investigated at a plant in Indiana.

Only 60 Infections

Only 60 cases of proven infection caused by accidental exposure to virulent biological warfare agents are reported during the researches and all recovered completely or are recovering. There were also 159 accidental exposures which received prompt treatment and did not develop infection, except one case in

which the exposure was not reported, the disease developed and the person recovered after treatment.

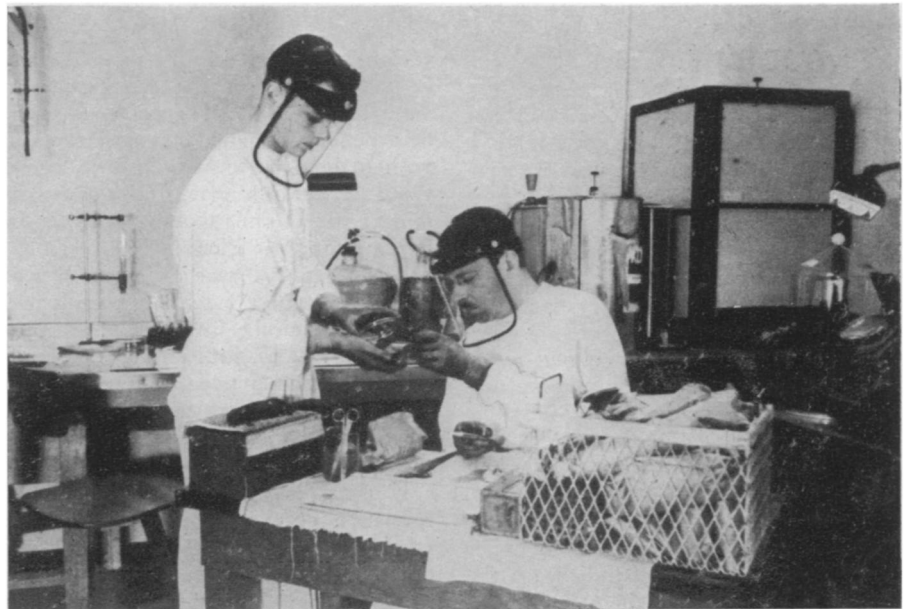
The biological warfare program was undertaken, the report states, "under the goad of necessity and aimed primarily toward securing for this nation and its troops in the field adequate protection against the possible use by our enemies of biological warfare agents. Adequate defenses were devised and the possibility of surprise from this quarter was forestalled."

Of Lasting Value

Much information of great and lasting value for human welfare was obtained, the report claims. Unique facilities were established for research and experimentation on pathogenic agents on a scale never before possible.

Important accomplishments of the biological warfare program listed in the report are:

1. Development of methods and facilities for the mass production of microorganisms and their products.
2. Development of methods for the rapid and accurate detection of minute quantities of disease-producing agents.
3. Significant contributions to knowledge of the control of airborne disease-producing agents.
4. Production and isolation, for the



PEACETIME HEALTH AIDS—While investigating possible enemy use of infectious disease as a weapon, Naval Medical Research Unit No. 1 also assimilated information for control of communicable airborne diseases. Here an autopsy is held on one of the animals infected during the course of studies at the University of California. Official U. S. Navy photograph.